

INSIDE DOPE

by GEORGE F. TAUBENECK

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Add Washington Stories
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Story of the Week

"Trouble with Gary," an executive dictated in a memo, "is that he has a duplicitous mind."

As it came back from his precise secretary the big word read, "Duplicitous."

At first Mr. Exec started to cross it out impatiently. On second thought he consulted his unabridged dictionary to see if such a word as "duplicitous" exists. It does. Definition:

"Sub-order of rodent family; rabbit."

Smirkingly he let the memo stand.

Gags of the Week

No wonder mosquitoes are hard to eradicate. People continue giving them blood transfusions.

"Do you believe in luck?"

"Certainly," averred French novelist Jean Cocteau. "How else can you explain the success of your friends?"

Sports Note

At a recent banquet in the Bayview Yacht Club, our mutual friend Ted Coggin, of Detroit Controls, was signally honored.

He was named "Best Sailor on the Great Lakes."

Eleven times he has master-minded and master-muscled winners in the annual Mackinac Prizes sailing races.

His latest winning boat was Sashay. As the *Detroit Times* concluded, in its story of the banquet and the honor:

"Winning with Sashay was just another job well done by wife Mary Coggin's little treasure in action."

Add Washington Stories

The personnel directory of the National Production Authority lists an Administrative Officer in the Administrative Services Division of the Office of the Assistant Administrator for Administration. — *The New Yorker*.

Add Washington on the Potomink Stories

Apprehensive about Winston Churchill's visit a Truman servant sought advice from the British Embassy as to the Prime Minister's choice of food and liquors.

"Rahilly, old man," down-nosed the Briton, "Winnie's tastes are awfully simple. He is easily pleased with choice beef and Napoleon brandy—along with the best varieties of everything else."

Quotes of the Week

"It seems that whenever I get a little leisure for my own affairs somebody always calls up and asks me to do something for him."—VINCENT STARRETT.

"Cleanliness is a great virtue; but when it is carried to such an extent that you cannot find your books and papers which you left carefully arranged on your table—when it gets to be a monomania with man or woman—it becomes a bore."—CHARLES B. FAIRBANKS.

"If we noticed little pleasures as we notice little pains—if we quite forgot our losses, and remembered all our gains—if we looked for people's virtues, and their faults refused to see—what a comfortable, happy, cheerful place this world would be!"—*Tampa Sun Dial*.

An old Negro waiter who, when asked how he got along so happily and well, said: "Well, I tend to my own business. I'm thankful for what" (Concluded on Page 8, Column 1)

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AIR CONDITIONING & REFRIGERATION News

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Improper Care, Not Bakers, at Fault for Contaminated Food

BUFFALO—Bakers cannot be held responsible for custard and cream-filled products becoming contaminated because customers neglected to put them into refrigerators, so long as "wholesome raw products and proper processing and refrigeration" were used before delivery.

This opinion was given by Dr. Norman W. Bartz, chief of the Erie County Health Department's Bureau of Milk, Food & Restaurant Sanitation, in a talk before the Buffalo Retail Bakers Association here.

Dr. Bartz called custard and cream-filled products the "most dangerous" baked goods because they are "the most susceptible to bacteria" if not properly refrigerated.

York Previews '53 Room Coolers at Marketing Meetings

YORK, Pa.—York Corp. announced that it has started to conduct business administration conferences for its top distributor principals throughout the United States.

John R. Hertzler, vice president and general sales manager, explained that these meetings are not sales rallies, but deal with programs for marketing York air conditioning, refrigeration, and ice making equipment during the coming year.

Product, sales plans, and distribution policies will be thoroughly covered during the sessions. A number of York officials will participate.

He revealed that the 1953 models of room air conditioners will be previewed. The York line, it was learned, will consist of 11 models of $\frac{1}{2}$, $\frac{3}{4}$, $1\frac{1}{2}$, and 1-hp. capacity using air-cooled condensers.

(Concluded on Back Page, Column 2)

Dallas Restricts Water Use In Drouth Pinch

DALLAS—Drouth-provoked water shortages have caused the Dallas city council to impose restrictions on water use, including certain regulations on the use of air conditioning systems.

Air conditioning systems with 1,800 c.f.m. and over air handling capacity must use some type of water recirculating system, the council has ruled. Banned is the use of water for lawn sprinkling, car washing, washing down of filling station aprons, water fountains, swimming pools, or on golf courses.

Action was taken by the Dallas city council after city engineers re-

(Concluded on Back Page, Column 5)

Mitchell To Produce Special Sears Model

CHICAGO—An entirely new line of window-type room air conditioners to be sold by Sears Roebuck & Co. will be produced by the Mitchell Mfg. Co., Chicago. It has been announced by B. A. Mitchell, company president.

The new line, which will be marketed under the Sears Coldspot label, will be available in both the company's retail outlets and mail order division. Included in the line will be $\frac{1}{2}$, $\frac{3}{4}$, and 1-ton units. They will be produced in a new and separate manufacturing facility that has been

(Concluded on Page 4, Column 4)

Kelvinator Bows Broadened Line To Distributors

Upright Freezer, Room Unit Among New Items; Details Withheld for Present

DETROIT—Kelvinator last week showed its distributors a greatly broadened line of major appliances, including an upright home freezer, a room air conditioner, a full line of kitchen cabinets, and announced plans to introduce Kelvinator laundry equipment as soon as tooling can be completed. New refrigerator and electric range models were also unveiled.

Details of the new product lines will be withheld pending public announcement at a New York press conference Nov. 17. Heart of the new refrigerator line, reports General Sales Manager D. A. Packard, is a series of five models only 28 $\frac{1}{2}$ in. wide, aimed at the replacement market. All refrigerator models will feature the Kelvinator full-length door.

Packard said that only one day of the five-day series of conferences with its distributing organization was devoted to new product presentation.

(Concluded on Back Page, Column 1)

Aug. NEMA Freezer Sales 13% Higher Than In '51

NEW YORK CITY—Freezer sales by the 25 firms reporting to the National Electrical Manufacturers Association for August were 13% higher than they were in August of last year, figures released by the association show.

Sales for the first eight months of the year nosed 2% ahead of comparable volume in 1951. These firms sold 534,325 units in the 1952 period as compared with 523,324 in the 1951 period.

The sales total for August was 77,873. Though higher than last year's 68,587, it fell 14% short of the preceding month's figure of 89,767.

(Concluded on Page 4, Column 5)

Underwriters' Laboratories Revises Air Conditioning, Refrigeration Standards

(When the new Underwriters' Laboratories standards were released to the refrigeration and air conditioning industry, the NEWS asked an industry engineering consultant to analyze and summarize the significant parts of the new standards. This is being done in two articles, of which this is the first.)

DETROIT—Underwriters' Laboratories, Inc. has recently released the ninth edition of its "Standard for Air Conditioning, Commercial, and Domestic Refrigeration Equipment," which supersedes and combines the eighth edition of the "Standard for Air Conditioning and Commercial Refrigerating Equipment" and of the "Standard for Unit Refrigerating Systems" both dated February, 1946.

This standard is the most important of all standards of the industry, governing the design, construction, testing, marking, materials used, and the safety devices and features of the equipment itself in the smaller sizes, and should therefore be familiar to all of us in the refrigeration industry; especially those engaged in the design, manufacture, installation, service, maintenance, and inspection of domestic, commercial and air conditioning equipment 30 hp. or less, and using 100 lbs. or less of refrigerant, to which this standard applies. Sections of this new standard re-

NPA Allows Extra Civilian Steel In First Quarter

WASHINGTON, D. C.—The National Production Authority has announced that there will be 1,480,000 extra tons of steel available for civilian goods manufacturing during the first quarter of 1953.

This follows announcement that allocations to most makers of consumer durable goods would be cut to one third their pre-Korean levels. The cut stirred up an immediate storm of protest, particularly from automobile manufacturers, who claim this steel "shortage" was more statistical than real and would result in widespread unemployment by the middle of February.

Harry J. Holbrook, resigning chief of the consumer durable goods division of NPA, agreed with the auto makers' position and their estimate that steel mills will actually have "open space" on their books to produce 3 or 4 million tons more steel in the first quarter.

(Concluded on Page 4, Column 3)

'Flash Defrosting' Refrigerator Tops Admiral '53 Line

CHICAGO, Oct. 31—A 7-cu. ft. "Flash Defrosting" refrigerator listing for \$269.95, and including full color, door shelves, full width freezer chest, and butter keeper, highlights the 11 new 1953 Admiral refrigerators introduced here today.

This automatic defrosting model, Admiral claims, melts the frost accumulation in the freezer chest in approximately seven minutes, at the touch of a button.

The new Admiral line includes two no-defrosting Dual-Temps, one deluxe automatic defrosting, and three Flash Defrosting models in 7, 9, and 11-cu. ft. sizes. Rollout shelves for greater ease of accessibility, door shelves that can be removed for cleaning, and the extension of eye-appealing "Glacier" (Concluded on Page 4, Column 2)

G-E Shows '53 Room Cooler, Appliance Line

2 Refrigerators Defrost Automatically; Room Units Adjust to Temperature

LOUISVILLE, Ky.—Two room air conditioners that will adjust themselves automatically to room temperature changes, two automatic defrosting refrigerators featuring a new system of defrosting, and a 14-cu. ft. upright food freezer were among the 1953 products unveiled here recently by General Electric Co.'s Major Appliance Div.

Also introduced at the preview showing for distributor principals and their top aides were:

Three completely restyled combination refrigerator-freezers and four manual defrost refrigerators.

A new 7-cu. ft. chest-type food freezer "of particularly compact design," and an 11-cu. ft. chest-type model.

A completely new line of eight full-size ranges, with two models having an automatic deep fat fryer attachment.

A new dishwasher incorporating a new control mechanism that makes it possible to repeat, skip, or interrupt any stage in the automatic dishwashing cycle.

Three new wringer washers.

At the same time, a five-point merchandising program was outlined. It includes a major sales campaign, re-vamping of the marketing operation, expanded advertising, intensive sales education activities, and a planning calendar for the division and its distributors and retailers.

The two room air conditioners were announced by H. B. Donley, general manager of the specialty refrigeration products department.

"After the units have been turned on," it was explained, "the refrigerating mechanism is controlled by a thermostat, adjustable to any one of six settings by means of a plastic dial on the front base of the cabinet."

"This thermostatic control turns the refrigerating mechanism off when the room temperature drops to the selected level and sets it into operation again when the temperature rises two or three degrees above that level. A ventilating fan will continue to circulate room air after the refrigerating mechanism has been cut off."

Three circular, louvered vents, located just behind a removable, ornate (Concluded on Page 21, Column 1)

Universal To Boost '53 Room Cooler Production

LIMA, Ohio—Room air conditioner production now projected for the 1953 market by Universal Major Elec. Appliances, Inc. will be eight times the output for 1952, reports Morton L. Clark, president of the company.

Clark said that new production facilities now being added to the Lima plant will be completed by Dec. 20, and will increase over-all productive capacity by more than 10%.

The new building will be used to expand the manufacture of room air conditioners and to create increased warehousing for the storage of suffi-

(Concluded on Back Page, Column 1)

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The most profitable franchise in the Major Appliance business

THE PROFITS, business reputation and future success of your business depend largely on how well you plan now. Without question, your profitable future is tied to the new great sales expansion in present low saturation appliances—such as ranges, dishwashers, food freezers, room air conditioners, food-waste disposers, dryers. Your future as a major appliance retailer depends upon making the right association now with the manufacturer who offers a sound program for tomorrow's big markets!

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2. **General Electric Offers "Consumer Preference"**—In independent national surveys, 55.7% of women said, "General Electric makes the best appliances."
3. **General Electric Offers Dependability** — G-E appliances have earned a nationwide reputation for year-in, year-out dependability unmatched by any other manufacturer.
4. **General Electric Offers Unusual Sales Opportunities**—Concentration on one fine line offers more efficient selling, with its consequent better turnover and fewer markdowns. Concentration on one *complete line of matched appliances* offers you the much-desired balanced annual sales curve.
5. **General Electric Offers Price Protection**—Protection on your reported inventory against lowering of list prices of General Electric Major Appliances.
6. **General Electric Offers A Powerful Advertising Program**—The Joan Davis and Fred Waring Shows on TV, the Bing Crosby Show on radio, leading national magazines and hundreds of newspapers are steadily pre-selling General Electric appliances to your customers.
7. **General Electric Offers Comprehensive Co-op Advertising**—General Electric, and its distributor, share the costs in newspapers, outdoor posters, car cards, TV, radio and motion pictures.
8. **General Electric Offers A Complete Display Program**—for each major appliance.
9. **General Electric Offers A Complete Sales-Aid Program** tested special promotions, sales literature, presentations, demonstration kits, consumer motion pictures, and many other aids for complete year-around sales programs.
10. **General Electric Offers A Realistic Sales-Improvement Program**—continuous sales education for sales personnel.
11. **General Electric Offers Dependable Product Service**—Product-service schools maintain high standards among G-E servicemen.
12. **General Electric Offers A Complete Finance Service**—The General Electric Credit Corporation covers every finance operation for you and your customers.
13. **General Electric Offers Continuous Distributor Cooperation**—The G-E plan is not simply to sell appliances to you—but to help you sell them to your customers.
14. **General Electric Offers Important Special Services**—The General Electric Home Bureau, leader in kitchen-laundry planning, and the Consumers Institute, conducting courses for salespeople in the proper use and care of appliances.
15. **General Electric Offers Prestige**—General Electric is the oldest and most respected name in the electrical industry.
16. **General Electric Offers A Stake in Its Blueprint of Opportunity**—Today, at Louisville, Ky., General Electric is investing millions of dollars in Appliance Park, the world's largest appliance-manufacturing plant.

Appliance Park is proof of our belief in the future of the appliance business. Appliance Park is designed to serve a rapidly expanding consumer demand with appliances that offer values greater than ever before. We sincerely think you can make your blueprints of the future bigger—by making them—and matching them with General Electric.

Clarence H. Linder

CLARENCE H. LINDER, General Manager

Major Appliance Division
Louisville 2, Kentucky

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Internationally known manufacturer offers position to Application Engineer—Age 25 to 35 with experience in refrigeration applications to food stores, restaurants and industrial installations. Requests for applicant to have had experience in Product Design, Production and in working with distributing outlets. Position offers excellent opportunity for promotion.

Send late photograph and full particulars on to education and experience to Box 6130, Air Conditioning & Refrigeration News.

Admiral Line--

(Concluded from Page 1, Column 4) Blue interiors to six models also are featured.

Aside from the company's Dual-Temp—a two-temperature freezer-refrigerator combination which does not require defrosting in the moist cold compartment, and a deluxe automatic defrosting refrigerator, Baker said Admiral was going all-out in the promotion of the three models with flash defrosting which enables the housewife to defrost whenever necessary and to clean the refrigerator simultaneously.

All the new models, except a standard 7-cu. ft. builder's model listing at \$189.95 which has a "U" type freezer, are equipped with full width freezers. Five models have an adjustable butter conditioner.

The two Dual-Temps and the automatic defrosting model now have two no-sag, non-rusting rollout shelves which enable the housewife to easily lift out food from the back of the shelf without removing bottles or packages in the front. A new flexible shelf arrangement on the 11-ft. model permits the storage of additional tall bottles when needed.

A single drop door has replaced split doors on all but one of the freezer chests in the Admiral refrigerator line. Use of this type door will permit the housewife to place packages of frozen foods on it while loading or rearranging the freezer section.

All but two models now have door shelves for additional storage of eggs, bottles, jars, and small packages.

Transparent Glacier Blue, snap-on

door shelves have been introduced to add color and facilitate cleaning of the unit.

Baker said from 20 to 22 lbs. of plastic parts are used in each 1953 refrigerator, with the two-door Dual-Temp model using approximately 31 lbs. He pointed out that this 12.2-cu. ft. two-temperature model contains a new plastic door liner that is the largest injection molded plastic part ever produced, measuring 43½ by 28 in.

Extra Steel--

(Concluded from Page 1, Column 4)

Holbrook also declared that appliance manufacturers and other makers of consumer durable goods should be able to get all the sheet and strip steel they want by the beginning of the second quarter. Bearing out this contention, NPA has now authorized manufacturers who use less than 500 tons of steel per quarter to self-allocate during the second quarter of 1953 as much steel as they used in the third quarter of this year. Previously they had been told they could self-allocate only 60% of the stipulated amount.

Holbrook said that his division is preparing to announce the types and quantities of "extra" steel to be available in the first quarter of 1953 and to invite manufacturers to submit requests for supplemental steel allocations.

He also suggested that NPA might drop Controlled Materials Plan controls on steel for civilian goods by the second quarter of next year. Heavier grades of steel and aluminum and copper would not be affected by such decontrol, however.

NEMA Sales of Home Freezers Hit 77,873 In August; 8 Months Sales Total 534,325

Summary for August and First Eight Months, 1952
Electric Farm and Home Freezers—Complete—Sales by Sizes—Units

Farm and home freezers complete with high and low side and cabinet, where 50% or more of the net cabinet capacity is designed for the freezing and/or storage of frozen foods.

AUGUST (25 Companies)

Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total
1. 4.9 cu. ft. and under	837	46	9	892
2. 5.0 to 6.9 cu. ft.	2,302	...	36	2,338
3. 7.0 to 8.9 cu. ft.	7,334	49	351	7,734
4. 9.0 to 10.9 cu. ft.	3,773	13	11	3,797
5. 11.0 to 12.9 cu. ft.	24,891	976	202	26,069
6. 13.0 to 16.9 cu. ft.	27,088	377	50	27,485
7. 17.0 to 20.9 cu. ft.	6,185	60	30	6,275
8. 21.0 to 29.9 cu. ft.	3,425	20	5	3,450
9. 30.0 to 39.9 cu. ft.	132	...	...	132
10. 40.0 to 49.9 cu. ft.	...	...	...	...
11. 50.0 to 59.9 cu. ft.	...	...	...	...
12. 60.0 cu. ft. and over	1	...	...	1
Total—All Models	75,738	1,541	394	77,873

FIRST EIGHT MONTHS (25-24 Companies)

Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total
1. 4.9 cu. ft. and under	8,901	177	10	9,088
2. 5.0 to 6.9 cu. ft.	18,582	25	1,209	19,816
3. 7.0 to 8.9 cu. ft.	58,431	1,373	1,538	61,342
4. 9.0 to 10.9 cu. ft.	34,837	122	543	35,502
5. 11.0 to 12.9 cu. ft.	123,406	3,611	1,540	128,557
6. 13.0 to 16.9 cu. ft.	181,442	1,903	480	183,825
7. 17.0 to 20.9 cu. ft.	63,725	521	164	64,410
8. 21.0 to 29.9 cu. ft.	30,219	166	24	30,409
9. 30.0 to 39.9 cu. ft.	1,157	...	...	1,157
10. 40.0 to 49.9 cu. ft.	...	...	...	...
11. 50.0 to 59.9 cu. ft.	1	...	...	1
12. 60.0 cu. ft. and over	18	...	...	18
Total—All Models	529,719	8,098	5,508	534,325

Participating companies: Avco Mfg. Corp.; Ben-Hur Mfg. Co.; Carrier Corp.; Coolerator Co.; The Deepfreeze Appliance Div., Motor Products Corp.; Frigidaire Div., General Motors Corp.; General Electric Co.; Gibson Refrigerator Co.; Hotpoint Co., Div. General Electric Co.; International Harvester Co.; Kelvinator Div., Nash-Kelvinator Corp.; A. J. Lindemann & Hoverson Co.; Masterfreez Home Locker Mfg. Co.; Maytag Co., The Norge Div., Borg-Warner Corp.; Philco Corp., Refrigeration Div.; Revco, Inc.; Ryan Industries (In 7-1-52); Sanitary Refrigerator Co.; Schaefer, Inc.; Seeger Refrigerator Co.; Emil Steinhorst & Sons, Inc.; Victor Products Corp.; Westinghouse Electric Corp.; Wilson Refrigeration, Inc.

Sears Room Coolers--**Freezer Sales--**

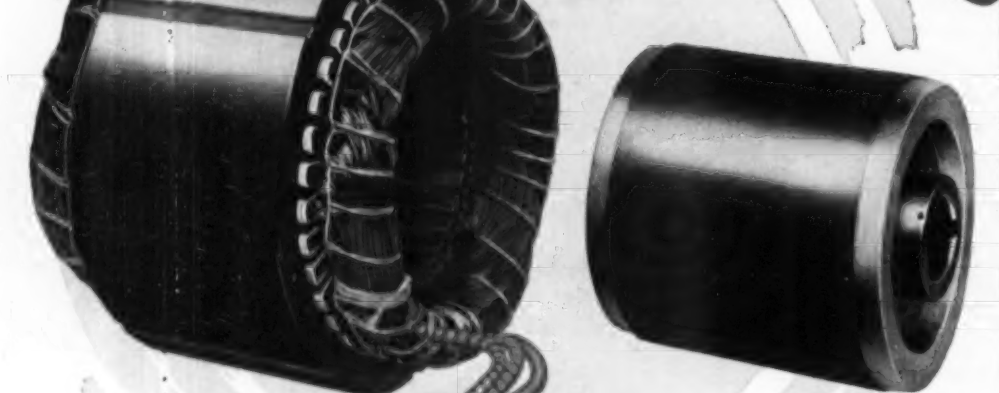
(Concluded from Page 1, Column 2) established by Mitchell and are to be designed expressly to Sears' specifications. A high speed production line will be capable of a unit a minute.

Mitchell has geared its operation to produce a minimum of 50,000 Cold-spot units, and it is reported that Sears' initial order was in excess of 20,000 units.

During the 1952 selling season, Sears stores throughout the country sold Mitchell room air conditioners which were purchased by Sears from Mitchell distributors.

(Concluded from Page 1, Column 3) Only in June, when the all-time record of 98,871 freezers were sold, and in March, 1950, when 77,937 units were moved, has the August total been exceeded.

Canadian and other foreign country sales did not follow the July to August decline of domestic sales for the NEMA firms. Canadian sales for August were 11% higher than July while sales to other foreign countries were up 44%. However, their overall total was not sufficient to change the 14% decline in the United States.

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Delco Hermetic Integral H.P. motors are setting the pace in today's trend toward larger hermetically sealed refrigeration systems.

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Yes . . . it pays to specify Delco integral h.p. hermetic motors for commercial refrigeration units, retail store air conditioning systems, and the like. For complete information, write to Delco Products, Dayton, Ohio, or call the nearest sales office listed below.

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ALSO MANUFACTURERS OF DAIRY-DELICATESSEN AND DISPLAY CASES . . . BEVERAGE COOLERS . . . PASS-THRU CABINETS . . . DOUGH RETARDERS . . . BAKED GOODS FREEZERS.

All This and Texas, Too! Homes Come with Freezer, Air Cooling, a Cadillac

DALLAS—Year-round air conditioning . . . a food freezer and refrigerator containing choice meats . . . a Cadillac in the garage.

These are some of the things awaiting the buyers of some 30 homes here which will sell from \$40,000 to \$110,000.

The luxury homes featuring General Electric year-round air conditioning are being put up in the Northaven Hills section of Dallas by Builder Howdy Howard on a speculative basis. The first model in the development, to be known as Holiday Homes, was opened to the public recently.

In addition to departing from the usual practice in building such luxury homes, the youthful Dallas builder is offering the houses for sale with a Cadillac in each garage as a special bonus to buyers.

When the buyer moves in he will also find choice meats in the food freezer and groceries on the pantry shelf and in the refrigerator. The buyer will also find his house carpeted and draped throughout.

Howard predicts his revolutionary approach will usher in a new era of building and selling fine homes in Dallas—if not any place else.

Smaller Holiday homes will have three bedrooms, living room, dining room, two and a half baths, a large patio, and a two-car garage. Larger homes in the luxury colony will have four bedrooms, a den, and a swimming pool.

All will have General Electric "push-button" year-round indoor climate control and all will be lavishly appointed and decorated.

The first house put on display will sell for the "Texas low price" of \$69,500.

Husmann 3rd-Quarter Sales Show Increase

ST. LOUIS—Sales of Husmann Refrigerator Co. in the third quarter were up from the year-ago level but net income declined, the company reported.

Third-quarter sales totaled \$5,231,947, compared with \$4,393,517 in the like 1951 period. Net income for the quarter amounted to \$232,693, or 53 cents a share, against \$307,057, or 71 cents a share, in the 1951 quarter.

For the nine months ended Sept. 30, sales amounted to \$14,780,108, compared with \$15,801,432 in the corresponding period last year. Net profit in the first three quarters of this year was \$821,609, or \$1.89 a share, against \$1,152,505, or \$2.74 a share, a year ago.

W. B. McMillan, president, pointed out that third-quarter operations and profit were set back by a local trucking strike. The month-long strike, which did not include Husmann employees, nearly stopped operations of the refrigerator division, he said.

The company expects sales and profits in the fourth quarter to be substantially larger than in last year's final quarter.

Fleischaker Replaces Names on NARDA Board

CHICAGO—Joseph Fleischaker, president, Will Sales, Inc., Louisville, was elected to the executive board of the National Appliance and Radio-TV Dealers Association, to fill the unexpired term of Herb Names, Denver, past president of the organization who resigned because he has become a distributor instead of a retailer.

The executive board also approved the dates of Jan. 11, 12, and 13, 1953, for the annual convention of the organization and mapped out a tentative program for the affair.

Mort Farr, president of the association, announced his appointment of a nominating committee to select five candidates for the board of directors. H. B. Price, Jr., of Norfolk, Va., is chairman of the committee.

Members are Clarence Bode of Milwaukee, Robert T. Dowd of Washington, D. C., Wallace Johnston of Memphis, Albert Labiche of New Orleans, J. Henderson Stock of Mechanicsburg, Pa., and Kenneth J. Stucky of Fort Wayne. Five members of the 15-man board are added each year for a three-year period.

Spot Check of Cities Shows—

Inadequate Refrigeration, Sanitation Responsible for Food Poisoning Epidemic

CHICAGO—An inspection program launched in an Atlantic Coast city following an outbreak of food poisoning and trench mouth cases revealed inadequate refrigeration in a number of restaurants, according to *Health Officers News Digest*.

The publication also reported that a check in a midwestern city where six persons became ill after eating chocolate eclairs in a hotel showed that the eclairs had been handled in an unsanitary manner and had not been properly refrigerated.

The article, cited by the National Restaurant Association, pointed out that outbreaks of disease caused by food and drink have figured prominently in recent news reports, "the largest and most recent having occurred at a boilermakers' picnic at a northwestern city. Hundreds of persons are said to have been stricken."

"The Health Department of a north central Atlantic city recently was deluged with complaints resulting from cases of trench mouth and food poisoning."

Seven cases of trench mouth were reported by individuals after eating

in one restaurant, and another restaurant was involved in a report that 23 out of a group of 24 girls developed food poisoning after eating there.

"An intensive inspection program was launched. Among the first 85 establishments checked, 37 had to be ordered to make immediate improvements."

"Excessive bacteria counts were found on glassware which could result in epidemics such as trench mouth. Poor refrigeration was found in 10 restaurants. Nearly 500 lbs. of meat, poultry, and fish were found unfit for consumption and destroyed."

Small Appliance Service Center Opens in Texas

TYLER, Texas—The East Texas Appliance Service Center has been opened here for the repair of all small appliances. The firm is franchised with Westinghouse Electric Corp. to repair in warranty Westinghouse small appliances. It is negotiating with other manufacturers for similar franchises, according to Mrs. V. W. Moore.

Appliance Mfrs'. Profit Margins Are So Low, New, Cheaper Materials Must Be Developed, Craig Says

WHITE SULPHUR SPRINGS, W. Va. — An appliance manufacturer called for industry's suppliers to "keep up on their developmental homework" and seek new means of lowering the costs of their goods and services or industry would have to look elsewhere for new and less costly materials for its products.

John W. Craig, vice president of Avco Mfg. Corp. and general manager of its Crosley Div., told members of the Porcelain Enameling Institute that "margins of profit for manufacturers of consumer goods have seldom been so dangerously low and they are shrinking every day."

"You are going to have to help us pare our costs to give the customer the best possible price on our products. You must keep up with technological advances and engineering and production developments to absorb more of the rising materials costs yourselves."

"You must experiment on new products and methods if you are to operate competitively and keep yourselves—and us—in the market," Craig told members of the institute at their annual meeting here.

"You must sell us goods and components as inexpensively as we can

produce them ourselves; otherwise we would be foolish not to build them ourselves. Continuous price increases in raw materials and fabricated parts can't be absorbed by manufacturers."

"There are two avenues open to the producers—particularly those in the appliance field. One is to substitute equally as efficient, but lower-costing materials for the standard ones now in use whose prices have risen beyond economically sound levels. The other is to develop entirely new materials and nourish the technical skills necessary to put them to use."

While business ahead looks good, Craig said, "higher manufacturing costs, higher distributing costs, and higher costs of doing business on the retail level are taking dollars out of profit margins and the incentive out of doing business in an alarming number of cases."

"Attractive and economically sound margins must be created if we are to furnish the public with the products they want at the prices they are willing to pay."

"Today the appliance industry is already spending nearly as much engineering ability in taking the cost out of its products as it is in adding features to them."



**smaller
than your
FIST**

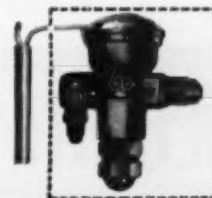
**that's all the space you need for an
ALCO 402**

This compact Thermo Expansion Valve is designed for freezers and display cases where space is at a premium.

Liquid charge permits mounting valve anywhere in any position.

Pressure limiting for motor protection. Wide range super-heat adjustment.

SEND FOR OUR BULLETIN 402 AND SEE YOUR ALCO WHOLESALEMAN.



3 Sizes:

- 402-1—up to 1/4 ton "F-12" or 1/2 ton Methyl Chloride
- 402-2—up to 1/2 ton "F-12" or 1 ton Methyl Chloride
- 402-4—up to 1 ton "F-12" or 2 tons Methyl Chloride



ALCO VALVE CO.

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Designers and Manufacturers of Thermostatic Expansion Valves, Evaporator Pressure Regulators, Solenoid Valves, Float Valves, Float Switches.

Underwriters' Laboratories Revises Standards--

(Continued from Page 1)

other features which their examinations and tests may find to impair the results intended by the requirements of the standard.

Conversely, minor deviations in materials or forms of construction may not necessarily condemn the equipment if Underwriters' examination and tests show that the results are substantially equivalent to those intended in the standard. Moreover, the standard is subject to revision if it is indicated desirable by further tests and field experience.

Equipment covered by the standard is divided into two general classifications—self-contained units, in which the complete device is factory assembled, and refrigeration system components, designed for field installation or for use by manufacturers of systems.

Self-contained units are further sub-divided into:

Air conditioning units, such as: window and console (floor type) room air conditioners, store or office type air conditioners (often referred to as "store coolers"); the larger central air conditioning units (but not larger than 30 hp. and containing not more than 100 lbs. of refrigerant) such as those of 10, 20 or 30-ton capacity having compressor, motor, evaporative condenser, and evaporator integrally mounted, for use in cooling theaters, cocktail bars, etc.; oxygen-therapeutic units (in hospitals, etc.); and electrically-operated heat pump systems, sometimes referred to as "reverse-cycle systems"; all self-contained, al-

though ductwork may be connected to them at the time of installation.

Commercial units, such as: beverage coolers; water coolers; cup and bottle beverage vending machines; display cases; soda fountains; ice cream cabinets and freezers; ice makers; and carbonating equipment.

Domestic units, such as: household refrigerators, dehumidifiers, and home and farm freezers.

Refrigeration system components include: refrigerator cabinets; condensing units; cooling units (evaporators); compressors; condensers; receivers and combination condensers; oil-separators; equalizers; pressure-relief devices; valves; controllers; and similar accessories. Motors are not specifically mentioned in this section, but are referred to in subsequent sections.

DESIGN AND CONSTRUCTION

The next major section of the standard discusses: wiring, both supply connections and internal; spacings of insulated and uninsulated parts carrying electric current; grounding; controllers; motors and motor-overload protection; refrigerants; pressure vessels; various safety devices; pump-down capacity; air filters; corrosion; tubing and fittings; and general safety considerations.

WIRING—SUPPLY CONNECTIONS—NON-PORTABLE EQUIPMENT

Non-portable equipment includes cabinets and freezers of net storage capacity of 20 cu. ft. or more; commercial type water coolers of four-

tain type over 1/2 hp. and remote, cafeteria, and industrial processing types; display cases and other commercial cabinets irrespective of size; and in general, all equipment connected to water or gas supply except as may be specified.

Such equipment must have conduit box or other provision for connection of conduit or similar "permanent" wiring. Service cords shall not be used.

Wiring and wiring connections must be polarized; the grounded wires such as the neutral must be marked white, and "hot" wires some other color.

WIRING—SUPPLY CONNECTIONS—PORTABLE EQUIPMENT

Portable equipment shall not exceed a net storage capacity of 20 cu. ft., and includes domestic refrigerators and freezers; small commercial cabinets such as beverage coolers, ice cream cabinets, reach-in cabinets (but not including display cases) and small office type water coolers; automatic beverage vending machines; window or console air conditioners; and other portable, self-contained equipment that may be readily disconnected from the source of electrical supply.

Supply connections for such portable equipment shall be by types S, SJ, ST, SJT or acceptable equivalent flexible electric cord. If the portable equipment has a rating of 150 volts or less, the attachment plug need not be polarized; but if over 150 volts, the plug must be polarized so that the neutral or grounded wire

shall be continuously maintained.

WIRING—INTERNAL

Internal wiring of self-contained equipment, portable and non-portable is discussed under the classifications of air conditioning equipment (window, console, and store cooler types); commercial equipment; and domestic equipment (including home and farm freezers).

Under this general heading of internal wiring, the standard specifies the types of wire as to sizes and insulation that may be used in various locations in window unit and console air conditioners, store or office type self-contained air conditioners; commercial and domestic equipment; also conduit, fittings, armored cable, etc.

Appendices A, B, C, D, and E are referred to in this section. These appendices illustrate and specify details of types of wire, protection to wire and current-bearing parts, overload protectors for compressor and fan motors, horsepower of switches and selections, air filters, interior lights and their switches, and similar parts of: room air conditioners, window-type; store and office air conditioners; domestic and portable commercial cabinets, such as small reach-in cabinets under 60-cu. ft. storage capacity; ice cream cabinets, beverage coolers, etc.; non-portable self-contained equipment, including display cases, fountain equipment, built-in commercial assemblies, and all cabinets over 60-cu. ft. storage capacity.

SPACINGS

The spacing between current carrying parts, both bare and insulated, at different voltages and amperages, is a subject that receives a considerable amount of attention by Underwriters, for it has an important bearing on the leakage or arcing of current between the current-bearing parts, and consequently the safety of the device.

Where no spacing standards exist for the electrical components of refrigeration and air conditioning equipment (such as starting relays, capacitors, and other miscellaneous parts, but not including motors), these devices shall comply with

section screws, switch contacts, and blades, or other bare current-carrying parts.

The standard provides that such bare, live parts shall be enclosed, even though they are in a compartment, if the owner or serviceman may have to go into or reach into that compartment to oil, clean, or adjust the equipment, change filters, etc. This applies also to vending machines that may be opened for refilling or coin collecting.

Doors or removable panels or compartments enclosing bare current-carrying parts must require the use of tools to open. Wing nuts, handles or similar means must not be used.

CONTROLLERS

Since Underwriters have separate standards regulating motor starters, pressure and temperature controls, and other electrical control devices, this section simply refers to those other standards, specifically the "Standard for Temperature-Indicating and Regulating Equipment" and the "Standard for Industrial Control Equipment."

MOTORS AND MOTOR-OVERLOAD PROTECTION

This is an important section, particularly to the service or maintenance engineer, for it covers permissible motor loading, a subject that is widely misunderstood.

Permissible overload of motors is quite complex, and cannot be fixed by a simple percentage. The type of motor—open, enclosed or hermetic—materials of which it is made, especially the insulation, duration of load, room temperature, air movement, etc., all affect it. Broadly, however, a hazard is considered to exist if the windings of the motor attain a temperature of 150° C. (302° F.) when tested in a room temperature of 25° C. (77° F.).

The standard states broadly, that all motors must be "protected against hazardous overheating under normal and abnormal operating conditions."

Motors used on refrigeration equipment are divided into "compressor motors" and "auxiliary motors."

Compressor motors may be protected by (a) inherent overheating (Continued on next page)

SPACINGS

Appliance Rating	Minimum Spacing in Inches Through Air	Over Surface	To Enclosure
Hp.	VA	Volts	
0-1	0-1600	0-300	1/4
More than	More than	1-150	1/4
1 hp.	1600 va.	151-300	1/4
		301-600	1/2

Underwriters' "Standard for Temperature-Indicating and Regulating Equipment," which shall also govern the spacing and clearance resulting from the assembly of the above mentioned electrical components into complete refrigeration and air conditioning equipment.

The standard does, however, give a rule that may be used unless such rule conflicts with the "Standard for Temperature-Indicating and Regulating Equipment."

This rule provides a table of minimum spacings in inches through air, over surface and to the enclosure, based on horsepower, volts and amperes, between an uninsulated live part and (a) another uninsulated live part of opposite polarity (b) uninsulated grounded part other than the enclosure (c) insulated live part and (d) the walls of the metal enclosure, including fittings for conduit or armored cable. The rule also specifies the material and its thickness, of insulating barriers between live parts and other parts referred to above under (a) (b) (c) and (d).

GROUNDING

Non current-carrying exposed or accessible metal parts of all refrigeration and air conditioning equipment, either fixed or portable, over 150 volts, shall be grounded.

Portable equipment, even under 150 volts, if it "may operate" in a wet location, shall be grounded by the use of a three-conductor supply cord, with the ground wire marked green.

Since the standard uses the words "may operate," this paragraph would seem to apply grounding to all portable equipment that may be exposed to wet location even though temporarily.

LIVE CURRENT-CARRYING PARTS

This section is designed to protect the owner or the serviceman from coming into contact with "hot" con-

WE HAVE WHAT YOU WANT...

For years the industry looked for an automatic

defrosting system for temperatures below 32° — and

from the KRAMER Laboratory came the wanted answer...

THERMOBANK. Now — eight years later — THERMOBANK stands as the

unequaled Standard of the Industry. Refinements made over the years bring

you now an even better THERMOBANK system. It is the system

recognized experts specify — because it ensures maximum

efficiency, minimum maintenance and lowest possible

operating cost. You can't do better than...

THERMOBANK

by **KRAMER**

WRITE FOR
BULLETIN R-124

KRAMER TRENTON CO. • Trenton 5, N.J.

CHILL CHEST

The Greatest
VALUE in
FOOD FREEZERS

THE FAMILY'S
PREFERENCE EVERYWHERE



Revco, INC. • DEERFIELD, MICH.

UL Standards--

(Continued from preceding page)
protective (built-in overload) devices, (b) overcurrent protective devices (line current relays as in starters, etc.), or (c) equivalent (which evidently contemplates time-lag fuses—but since ordinary fuses are not "equivalent" they would not be considered acceptable).

These protective devices must adequately protect the compressor motor, but they must also permit "pull-down" and continuous operation after pull-down, under the test conditions outlined in detail in a later section entitled "Maximum Normal Load Tests."

The section will be herein reviewed later, but for the present purpose, it may be stated that the tests are based on 40° C. (104° F.) room temperature, and continuous operation is with refrigerator door closed, or other normal operating condition as outlined in the load tests.

Inherent devices (built-in protectors) are mostly actuated directly by motor temperature, so the per cent of permissible overload varies with conditions that may affect the heating of the motor. Inherent protectors are factory applied and tested by Underwriters on the basis of temperature rise and maximum temperature; and motors so equipped are not limited as to an overload indicated by current consumption.

The subject is further complicated by the fact that the windings of the motors of some hermetic motor-compressor units may be cooled by returning suction gas, so may withstand higher overloads without overheating.

Protective devices in the supply line to the motor, such as overload relays and fuses of both the common type and the slow-acting type, are not directly affected by motor heat, and can only limit overload as indicated by line current.

Line type protective devices applied to open-type compressor motors 1-hp. and less, must be rated at 140% or less of rated full load current of the motor; so they can permit a maximum of 40% overload as indicated by line current.

Line type protectors applied to open-type compressor motors over 1 hp., must be rated at 125% or less of rated full load current of the motor; so they can permit a maximum of 25% overload as indicated by line current. If, however, overload heater coils are not available to limit the current to 125% of full load current, the next higher rated heater coil may be used, provided it does not permit a maximum current consumption in excess of 140% of full load current.

Auxiliary motors include those driving fans, blowers, pumps or other motor-driven accessories. They shall be protected either by inherent overheating or by over-current devices. Some types of motors, such as shaded-pole, whose high impedance on overload limits the current consumption, may be used without other protection, provided their design does not permit a hazard on locked rotor.

Auxiliary motors located in air-handling compartments connected to ducts, shall be protected by a listed inherent overheating device, unless such device is not available for that size motor, voltage or type of circuit; in which case, line type over-current protectors shall be used.

Motors on oxygen-therapeutic equipment must not permit their lubricating oil to enter the oxygen mixture stream. (This is to protect against explosion due to rapid oxidation of the oil.)

Motors having openings that might permit particles to drop out of the motor on combustible material, must be shielded.

SHORT-CIRCUIT PROTECTION

If there is only one motor in an enclosed compartment of a non-portable assembly, containing no combustible material other than a listed air-filter, the inherent overheating device in its internal branch circuit is exempt from group fusing requirements (does not require a separate fuse for that branch circuit).

In a non-portable appliance, a motor branch circuit does not have to be separately fused if (a) the conductors have a current-carrying capacity of not less than one-third of that of the main line conductors to the appliance, and (b) the internal branch circuits are routed and supported to prevent mechanical injury.

(To Be Continued)

3 Large Boston Department Stores Offer 3 Varying Freezer-Food Plans Featuring Brand-Name Freezers

BOSTON—Freezer-food plans are being offered here by three large department stores—Jordan Marsh & Co., Gilchrist Co., and R. H. White Corp.

Under the Jordan plan, customers buy a minimum of \$100 worth of food for immediate delivery and a Norge freezer. They can pay for the food, selected from the store's stock, over a four-month period, and are allowed 36 months to pay for the freezer.

The Gilchrist plan calls for 10% down and \$4.10 a week or \$17.60 a month. International Harvester freezers are sold as a part of this plan.

Patrons of the R. H. White "White Star Food Plan" have a choice of three plans. All provide a four-month supply of food and a Philco or Crosley freezer.

One plan is for a family of two adults and one child. It offers the food and an 8.1-cu. ft. freezer for \$10.21 a week. The second plan, for two adults and two children, gives

the customer the food and a 12.5-cu. ft. freezer for \$15.98 weekly.

Under the third plan, the customer gets the food and a 14.5-cu. ft. freezer for \$18.06 a week. This plan is for two adults and three children.

The store says its White Star plan enables the customer to have a freezer and enjoy choice meats and Birds Eye frozen foods "for four months and longer if you wish... for as little as \$1.46 per day." The plan requires no down payment and provides the customer with a three-year insurance policy.

Florence Line OK'd For B. F. Goodrich Stores

GARDNER, Mass.—C. Fred Lucas, vice president in charge of sales for Florence Stove Co., announced that his company's gas, oil, and combination ranges have been approved by B. F. Goodrich Co. for its national retail chain.

Niagara Falls Stores Add Second Night Opening

NIAGARA FALLS, N. Y.—Three appliance stores here have joined with other merchants in a new night opening program in which stores will be open both Monday and Thursday nights. Previously, the stores were open Thursday nights only.

The appliance stores are: The Home Appliance Co., Modern Electric Appliance Co., and Main Electric Plumbing Supply Co.

Cheyenne Group Opens Two Appliance Stores

CHEYENNE, Wyo.—The Triangle Sales Co., owned by a group of Cheyenne businessmen and headed by Joe Davis, local petroleum dealer, has opened two major appliance stores in Cheyenne at 100 E. 7th Ave. and 1811 Carey Ave.

Owen R. King, one of the group of owners and formerly of the King Coal Co. of Cheyenne, will serve as manager of the two outlets.

Merchandise Mart Offices Move to New Location

CHICAGO—Permanent headquarters of the Office of the Building, The Merchandise Mart, have been moved to Room 830, according to a recent announcement. All departments except the Merchandising Service Bureau have also been moved to the new space. Merchandising Service will remain in Room 1524A.

Buyer registration and information, sales promotion, the news bureau, and guided tours, departments which have temporarily occupied separate spaces in the building during the past few months, will also occupy 830, together with the executive, operating, accounting, and sales departments of the management offices.

Wolf Heads New Peru, Ind. Appliance Dealer Group

PERU, Ind.—An appliance dealers' association was formed here recently by eight retailers who elected Glen Wolf president and P. L. Bell secretary-treasurer.

Only Frigidaire Dealers Can Offer Such A Complete* Electric Range Line!

*NO OTHER LINE HAS ALL THESE SELLING ADVANTAGES!



- 1 Ten Great, Different Models—40" Ranges—30" Ranges—21" Ranges
- 2 Two Exclusive "Wonder Oven" Ranges
- 3 The Most Popular Two-Oven Range
- 4 Two Sensational "Thrifty-30" Ranges with Giant Full-Width Ovens
- 5 Three Value-Packed Standard Ranges...with All Basic Frigidaire Features
- 6 Two Compact Apartment-Size Ranges
- 7 Most Beautiful Styling on the Market
- 8 Exclusive Radiantube Surface Units
- 9 All-Porcelain Finish—Inside and Out
- 10 Plus many, many more exclusive Frigidaire Quality Features

"Wonder Oven" Ranges (2 models)

The only range on the market with the most usable, most flexible oven ever built! Becomes either two ovens or one large oven in just a few seconds. No other electric range made has faster pre-heating. No other range has more selling advantages, more exclusive features, more dollar-for-dollar quality.

De Luxe, Two-Oven Range

The lowest-priced De Luxe, two-oven range on the market! Here's the range Frigidaire Dealers sell to families whose cooking needs are great—or to folks who want the very finest range money can buy!

Standard 40" Ranges (3 models)

Three standard Frigidaire Electric Ranges—Models RO-10, RO-20 and RO-40, contain all the basic Frigidaire quality features—all the beauty and convenience of higher-priced models. Allow dealers to offer top quality at medium prices.

"Thrifty-30" Ranges (2 models)

Frigidaire Dealers have made this range one of the best sellers in the industry! Only 30" wide, and sensationally low-priced, it offers economy-minded families more cooking capacity than any other range of its size on the market today!

Only Frigidaire Dealers can offer the prospective electric range buyers such a wide area of selection. For, no matter what size family or budget—there's a Frigidaire Electric Range to meet every housewife's needs. What's more, nothing is lacking in features, styles, prices or

sales helps to make Frigidaire the nation's favorite electric range. And Frigidaire Dealers' banner sales records are proving this to be a fact, month after month. Is it any wonder then that Frigidaire Dealers place such a high value on their Frigidaire Franchises?



Apartment-Size Ranges (2 models)

Compact 21" width. One with 3 Radiantube surface units—one with 4 Radiantube units.

Frigidaire Electric Ranges

INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1) comes my way, but I don't expect too much. I put my trust in the Lord and try to follow His will. And I've learned how to get along with disappointment."—DR. NORMAN VINCENT PEARLE.

"If I were forced to give up the support of all other groups, I'd prefer to have the women on my side."—CHAS. P. HENNINGSON, mayor, Youngstown, Ohio.

"Sensible people have no conception of the delight which the mere consciousness of living intensely can give; one's heart swells, one's imagination soars into space, life is inexpressibly quickened, and one loses all consciousness of one's bodily limitations."—HECTOR BERLIOZ.

Eye-brow-Raiser-of-the-Week

In Detroit's Palmer Park there's a traffic sign:

"No parking from 1:00 a.m. to 1:00 a.m."

Philosophy of the Week

Happiness isn't so much a matter of position as it is of disposition.

An able man shows his spirit by gentle words and resolute actions.

"It is not hard to learn more. What is hard is to unlearn when you discover yourself wrong."—DR. MARTIN H. FISCHER.

Man is the only creature on earth who shortens his life by working hard in order to acquire things which will shorten his life still further.

"This is the gift that God reserves for His special proteges," he said. "Talent and health He gives to many. Wealth is commonplace, fame not rare. But peace of mind He bestows charily."—JOSHUA LOTH LIEBMAN.

"Three rules of life were given me some years ago. I pass them on, for I have found them practical: The first is 'Go,' the second is 'Keep Going,' and the third is 'Help someone else to go.'"—THEO ADAMS.

"We should live and learn; but by the time we've learned, it's too late to live."—CAROLYN WELLS.

Verse of the Week

J. C. Nofsinger, advertising manager of Drayer-Hanson, contributes this to Dope:

YOU'RE IN A JACKPOT NOW!
How oft we met in foreign climes, to plan and think up pacts.
To putter, dream and fool around—the heck! with cost and tax.
Atlantic, Casablanca — Teheran, Yalta too—
Potadam and later China, put U. S. in the stew.

And many more—they followed fast; the Truman doctrine—
The Morgenthau, the Marshall plan, all made behind the scene.

Our schemes were based on impulse—no looking ahead nor caring;
No searching for Reds among us, more fun to find "red herring."

"And who are we," you ask us, "who steered your ship of state;
Who did the long range planning and sat to cogitate?"

Perhaps you voters wonder, just how we got our jobs?
Well we were put there by the men, elected by you slobs.

We were Vincent, Jessup, Remington . . . Hiss, Service, and Lattimore, And Acheson and Lovett, and others by the score.

We told "Hair Trigger" Harry, what he had better do
And he knew he'd better do it, or find himself "all through."

We always agreed on policy—we always planned things right.
We acted with originality. While weak, we chose to fight.

George dealt in GENERALITIES.
"Why not?" we ask of you,
For Georgie was one GENERAL who never dropped a cue?

And when we wound up in a mess—our cousins 'cross the sea,
Advised that "GLOBAL PLANNING" forbade a victory.

We couldn't needle "Good old Joe"—we dared not make him mad.
For what were a few lives more or less, as long as Joe stayed glad.

L'envoi

So keep your shirts on, people; While we stand up and shout.
"WE PUT YOU IN THIS JACKPOT, BUT WE WILL GET YOU OUT!"



ROOM COOLER NEWS

Errors In Room Conditioner Sales Methods

Economist Nortman Scores Negative Sales Approach, Poor Consumer Instruction, Short Promotion Season

NEW YORK CITY—"Today the air conditioning industry stands at a crossroad. It will either develop and cement the concept of home air conditioning as an essential utility with positive economic and health advantages, or it will continue to present home air conditioning negatively as an escape from the heat."

Thus writes P. Bernard Nortman, New York economist who has specialized in studying air conditioning merchandising trends, in a recent issue of *Sales Management* magazine. Nortman has been writing a series of articles for *AIR CONDITIONING & REFRIGERATION NEWS*, analyzing merchandising trends in room air conditioners in particular.

At present, says Nortman in his article, the air conditioner for the home is an impulse product, bought to meet the exigency of the moment.

"Is there something inherent in a product which limits its sales to approximately one week a year, subjects it to weather fluctuations, and associates it with luxurious escape from uncomfortable heat and humidity?" he asks.

CAN AIR CONDITIONING BE DEVELOPED AS POSITIVE PRINCIPLE?

"Or can air conditioning be developed on the positive principle that it is an appliance of utilitarian value which offers the economic rewards of increased productivity, better health, greater efficiency, and decreased maintenance costs?"

It is Nortman's premise that the industry makes the following mistakes in selling room air conditioners:

1. Air conditioning units are promoted as a luxury. In advertising and sales promotion, the air conditioning industry makes a negative appeal.

The one main theme is that it offers an escape from the heat. Such positive values as dehumidification, removal of dirt and pollen, etc., are hardly touched upon.

The approach to the public is strongly competitive, Nortman says, whereas with the sales saturation so low the sales problem should not be a battle to obtain a share of the market by overplaying brand names, but rather the matter of increasing the market to its full potential by arousing the consumer to the indispensable utilitarian need for air conditioning.

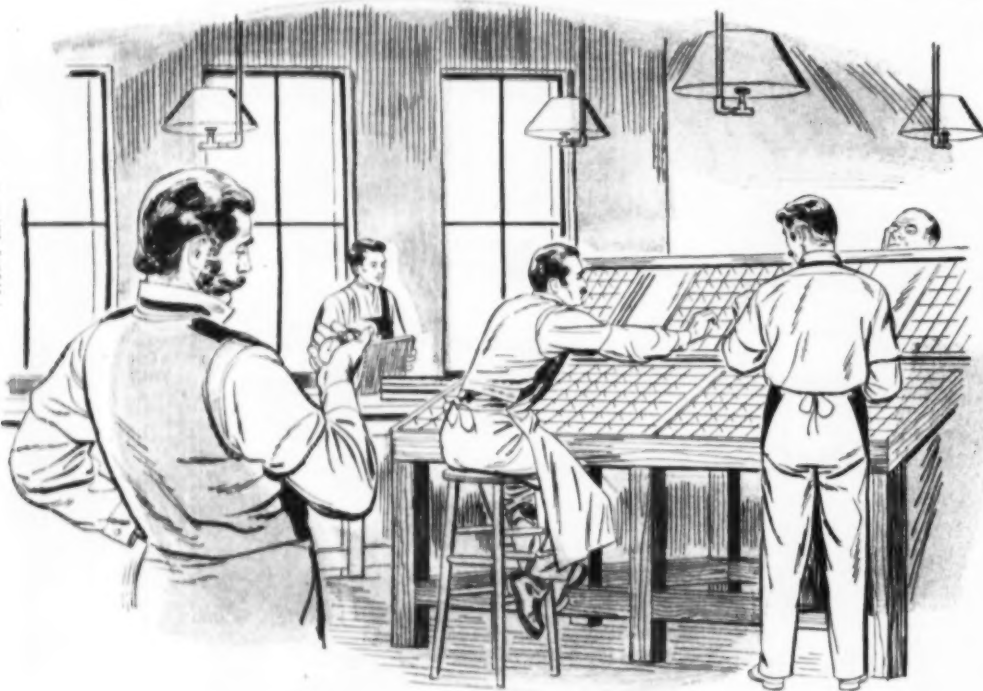
2. Health benefits are ignored. The public has not been informed of the health benefits of air conditioning, Nortman says, declaring that the medical profession is well ahead of the industry in finding the facts in this matter and in publicizing them. He quotes a British medical authority as stating that "atmospheric conditions not only have a direct and immediate effect in the production of fatigue, but they exert a cumulative action, which in course of time influences health and mortality."

Nortman believes room air conditioner promotion should emphasize this health angle, plus an appeal emphasizing the savings in time, money, and energy in household care and maintenance that air conditioning makes possible.

3. Marketing data is not used: The industry does not make use of the information available in medical, engineering, and industrial relations studies, and has done little on its own to study the effects of air conditioning.

"The salesman's chief argument when he tries to sell a unit, is that 'it will make you feel cool.' It is up to your imagination to tell you how and

(Concluded on next page)



Up-to-the-Minute News vs. Deadlines!

Now, pages of type are set mechanically, in the time formerly required for just a few hand-set paragraphs. Thanks to the invention of power-driven typesetting equipment, and its ready adoption, your modern newspaper meets edition deadlines with ease and with all up-to-the-minute news.

In all walks of life electric motor power has lightened the burden of toil and made working hours more productive. Emerson-Electric experience, dating back to

1890, covers this entire era of mechanization progress. Emerson-Electric Motors bring to your product the benefits of this valuable experience plus an enviable reputation for dependability and efficiency.

Consult with us, without obligation, about motors for your regular or new products. Standard Motors are made in horsepower ratings 1/20 to 5 H.P., and Hermetic Motor parts 1/8 to 15 H.P. Write...

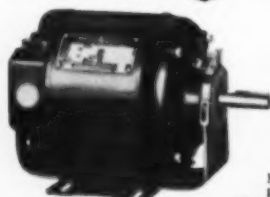
THE EMERSON ELECTRIC MFG. CO., St. Louis 21, Mo.

MODERN BUSINESS IS POWERED WITH ELECTRIC MOTORS



HERMETIC MOTORS
1/8 to 15 H. P.

We offer manufacturers of hermetically sealed units a broad background of engineering experience in hermetic motor design. We also have unequalled facilities for the production of hermetic motor parts. Co-operative engineering service available without charge. Write for Bulletin No. M145.



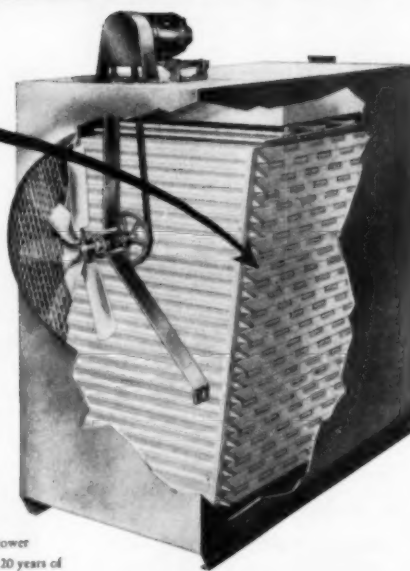
EMERSON ELECTRIC
MOTORS - FANS
Mergenthaler Linotypes have been powered with Emerson-Electric Motors since 1901.



Mergenthaler Linotypes have been powered with Emerson-Electric Motors since 1901.

HALSTEAD & MITCHELL COOLING TOWERS

5 TONS to 30 TONS CAPACITIES



Here's the industry's greatest cooling tower value . . . "built like a battleship" for 20 years of foolproof performance. Halstead & Mitchell's pioneering in exclusive use of Koppers pressure-treated wood in the wetted deck surface makes possible the unprecedented 20-year guarantee against rotting, and provides the industry's most effective deterrent against fungi growth. Economical, lasting . . . the special H & M design for water distribution eliminates, thru the use of an efficient gravity-type distributing pan, extra pumping head required on spray type towers, also cuts down windage losses due to atomizing of water. The complete assembly is with Everdur bolts . . . disassembly is easy even after years of service. Easily accessible for cleaning through inlet on back of towers in all sizes.

HOUSING
10 gage (1/4"+) sheet-steel case with 3 coats Bitumastic lining. Electrically welded cabinet.

FAN AND DRIVE
Quiet-operating stainless steel 8-bladed fan, stainless steel shaft, chrome-dipped rust-proofed pulleys. Cast iron bearing supports.

Write for descriptive bulletin

Halstead & Mitchell

OFFICES: BESSEMER BUILDING • PITTSBURGH 22, PA.

Room Air Conditioner Sales Methods--

(Concluded from preceding page)
why you should work and live under optimum weather conditions."

Nortman says that even in the industrial market the industry does not make available studies to promote its product. After he was quoted in a *New York Times Magazine* article on air conditioning, he received numerous calls from industrial concerns seeking information on whether or not air conditioning would be a wise investment for them—information which the industry should have had readily available.

4. **Output is not geared to demand:** Since demand for air conditioning units as they are now marketed depends primarily on weather conditions, units are built in advance and stored for short-season sales. Thus, supply cannot be geared accurately to demand, because the industry cannot predict weather. For example, if nature provides unusually hot weather, sales increase, but the season is too short for the industry to step up output sufficiently in time to meet demand.

PROMOTION AS NECESSITY WOULD SPREAD OUT SALES SEASON

If air conditioners were promoted as a necessary utility rather than a luxury product, the sales season could be spread out and the marketing program could be made more flexible.

5. **Dealers are not really helped:** Nortman declares that at the retail level, room air conditioner sales operate within a framework of price-cutting, unfair competition, impulse buying, and lack of direction from the manufacturer.

Some of the advertising and promotion is fairly good, but a lot of it consists of "canned throwaways," Nortman says, and there is little evidence of planned direction or help to put home air conditioning on a sound merchandising basis.

RETAILERS FEAR INVENTORY CARRYOVERS

The "luxury point of view" is reflected at the retail level, says the economist, with the retailer fearing the dangers of having to carry inventories over to another season, and so employing every kind of practice to get back his investment.

6. **Dealers fool buyers:** Because of the chaotic nature of the business due to the short season in which it is sold, standards in installation and service practices and charges vary widely, Nortman says. Some dealers don't go into the matter of installation and service at all with the customer, with the result that after buying a unit, the customer may have to fend for himself in getting it installed.

Little effort is made to train salespeople in instructing the public on the proper selection, use, and benefits of air conditioning.

7. **Poor instructions are provided:** There are still many misconceptions about air conditioning, and some

suspensions about whether "it is good for me," some of the latter based on misapplications of comfort cooling in movie theaters, etc. Most people can adjust with ease to a properly conditioned atmosphere, and they should be told this. The industry needs to teach the public what air conditioning is, what it can do, how it should be used.

Nortman concludes by saying that if the air conditioning industry takes up the challenge, the next big change in man's environment will be widespread application of man-made weather for human comfort, health, and efficiency, and "people will not ask themselves if they can afford air conditioning any more than they now question whether they can afford heat."

Johnson's Opens In Johnstown

JOHNSTOWN, Pa. — Johnson's Heating & Air Conditioning has opened its new showrooms at 633 Horner St.

Toney Directs Distribution For RCA Consumer Products

CAMDEN, N. J.—James M. Toney has been appointed director of distribution for the Consumer Products Dept., RCA Victor Div., Radio Corp. of America, it was announced by Joseph B. Elliott, vice president in charge of consumer products.

Toney's new position follows by two years his appointment as director of public relations for the division. He has been serving in this capacity since November, 1950.

Toney brings to his new post a background of experience in sales management, merchandising, and advertising, on both the distributor and national levels. Prior to coming to the company's headquarters, he worked closely with distributors and dealers in the fields of distribution, sales, merchandising, and advertising.

In 1948 he was named advertising and sales promotion manager for the RCA Victor Home Instrument Dept., the position he held prior to his appointment as public relations director for the division.

Contacting Current Users Provides Next Season's Room Cooler Prospects

SPRINGFIELD, Mo.—The wise air conditioning dealer will make maximum use of the final weeks of hot weather each year to build up his prospects for the following season, according to David Bluestein, head of Blues Home Appliance Store here.

Each year for the past five years, Bluestein has made use of late August and early September weeks to telephone persons to whom he has sold room coolers. Included are professional men, homeowners, commercial stores, shops, and offices.

At the end of the cooling season Bluestein telephones, and gives friendly, helpful advice on how to store the cooler effectively through the winter. In the course of the conversation, he asks the user whether any of his friends, relatives, or customers have seemed particularly interested in package air conditioning. Invariably, the customer will think of several names which Bluestein carefully files away for contacting during the spring months.

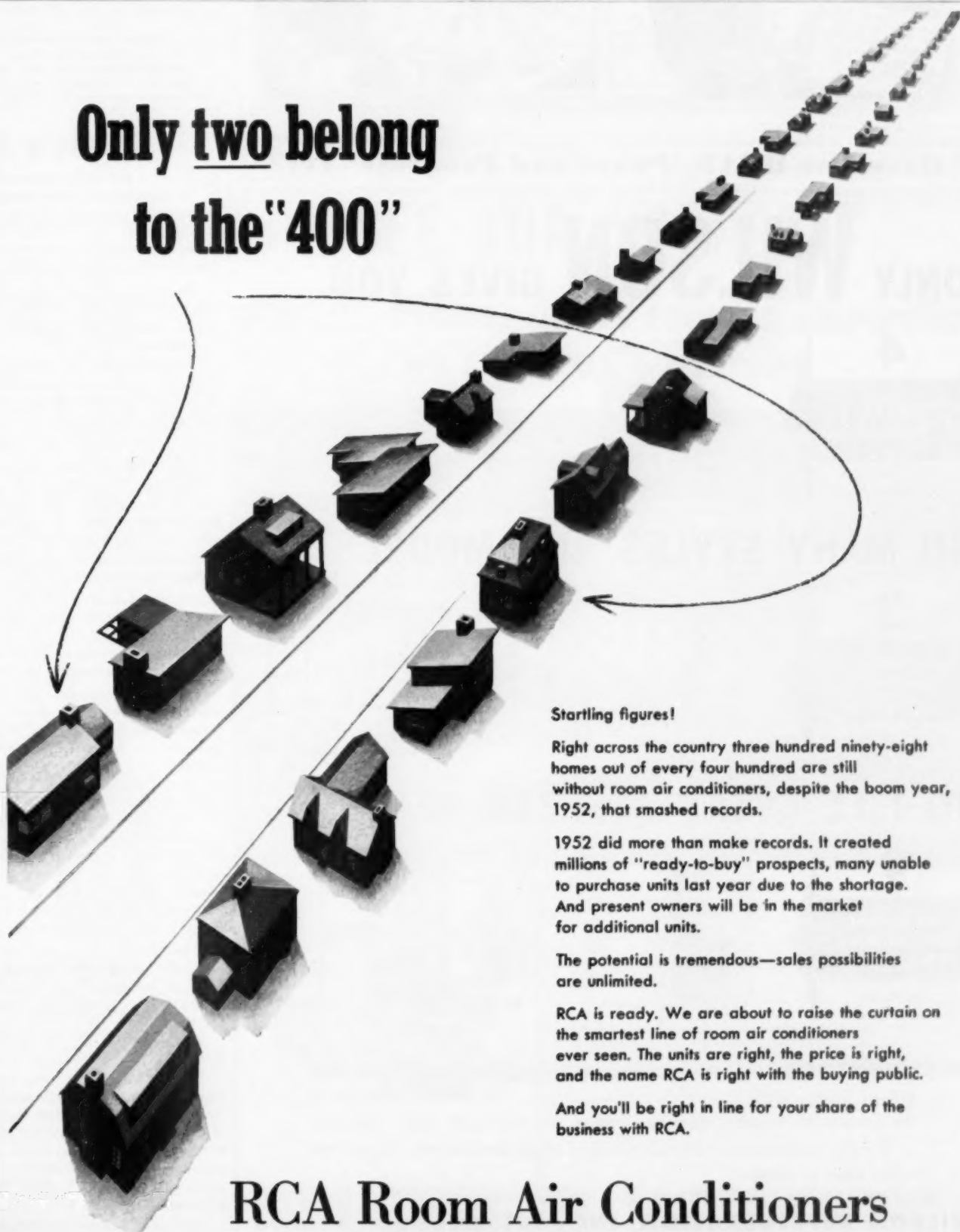
Beginning in late April, Bluestein either phones or makes personal calls to contact every suggested prospect armed with a phrase such as "Dave Allen told me of the interest you expressed in his cooler last year." The personal angle brought into the sales talk offers better reception.

With this approach, the firm has often been able to sell its entire inventory of room coolers by the time the other dealers are beginning to plan the current season's sales. "The important thing is to call the user near the end of the summer season, while the cooler is still in use, and when he is still thinking about it," Bluestein commented.

JUST ASK US

For "easy-to-get" product information... use coupon on "What's New" page.

Only two belong to the "400"



Startling figures!

Right across the country three hundred ninety-eight homes out of every four hundred are still without room air conditioners, despite the boom year, 1952, that smashed records.

1952 did more than make records. It created millions of "ready-to-buy" prospects, many unable to purchase units last year due to the shortage. And present owners will be in the market for additional units.

The potential is tremendous—sales possibilities are unlimited.

RCA is ready. We are about to raise the curtain on the smartest line of room air conditioners ever seen. The units are right, the price is right, and the name RCA is right with the buying public.

And you'll be right in line for your share of the business with RCA.



specify and buy
RUDY
mild steel
EVAPORATORS

Standard mild steel models...
galvanized...super finished
...styles for any application
...prompt service...low cost.

WRITE FOR DETAILS

RUDY Manufacturing Co.

Specialists in
Manufacturing Evaporators and Condensers
DOWAGIAC, MICHIGAN

RCA Room Air Conditioners

RCA VICTOR DIVISION

RADIO CORPORATION OF AMERICA



They'll Do It Every Time By Jimmy Hatlo



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Est. 1898



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"I have always felt that whatever the Divine Providence permitted to occur I was not too proud to report. The people are not served by pussyfooting, or by that sort of journalism in which nobody will ask who is the editor of a paper or the writer of an article, and nobody will care."—Charles A. Dana.

This Is a Fight, Brother

SAD days and nights apparently will linger on for genuine, heartfelt, "brung-up-right" protectors of American rights and privileges—we citizens who believe in Personal Freedom, our Constitution, America's Bill of Rights, etc. Utterly irresponsible academic theorists and political demagogues are getting worse by the hour. And they are damaging the priceless American will-to-win spirit almost beyond repair.

No matter how tellingly some of us may elucidate the boons of our wondrous Free Enterprise opportunities, political thugs and Communist Russian spies continue to discredit us, and to twist the souls of American young people.

They're masters of theory and debate, these Communists and Socialists. We're men of action, we businessmen and solid citizens. They know how to win arguments. We're either too tongue-tied or too busy to fight back.

We temporize while the Communists proselyte.

That's why we could lose the "cold war" by default.

Proposals for augmented governmental powers frequently are prefaced by assertions that the American system of free enterprise has failed of its purpose. Or, that Business is in a Purgatory (in which it must either prove its worth or be supplanted by theoretical Socialism, Communism, or some new form of State Slavery). These choices are anything but happy and lovely.

It's high time that we citizens who should know better challenge that lip-serviced demagogic concept. These silly figures-of-speech are not merely unsound. They're maliciously conspiratorial and treasonable. Loyal-to-Russia traitors, whose real purpose is not the improvement of democratic institutions but their destruction, espouse them.

We grow exceedingly weary of hearing how the so-called individual enterprise system is on trial. On trial for what? Has any other system accomplished so much or provided such high standards of living? It is not our America that must justify itself. It is Socialism (as in England) and Communism (as in Russia) that is on trial. American individual enterprise is providing the food, the money, and the tools to rebuild Europe, and to feed its starving populations. If the peoples of other nations place such utter reliance and dependence upon American Enterprise, surely Americans themselves should protect our own exuberant methods of getting things done. Our American Freedoms not only have been responsible for magnificent progress in our country, but they're so strong and so virile that they're underwriting and sustaining the shattered economies of the civilized and semi-civilized peoples elsewhere all over the world.

What would the skeptics and critics of the American Way have us adopt (should they succeed in convincing the American people that our traditional Free Enterprise has failed)? Would they put us under the thumbs and whims of Dukes, Barons, Kings, and Dictators—again?

Autocracy of every kind is opposed to The Pursuit of Happiness. Whether it be the autocracy of fascism, nazism, communism, socialism, or "welfare paternalism," true Americans want no part of it. Personal hopes of "getting ahead" would be impaired direly and actually destroyed should too many dumb voters plump for the socialization of our free country. Nevertheless: The trend everywhere today, even in the United States, is toward a collectivist society. "Masses" just don't seem to learn the right lessons from their misfortunes in the political arena. They're still "suckers" for demagogic Something-for-Nothing promises.

Intelligent people—especially those who are so comfortable that they "can't be bothered"—really and truly will have to spend money and time to reverse this trend, lest they be "liquidated." Voters need honest new leaders in our country.

Have You READ 'Peace and Progress' Yet?

ONLY WILSON GIVES YOU

4

CHEST
MODELS8, 15, 19, 24
cu. ft. sizes

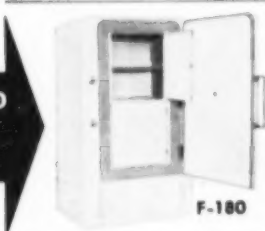
FC-82



FC-190

SO MANY STYLES AND MODELS

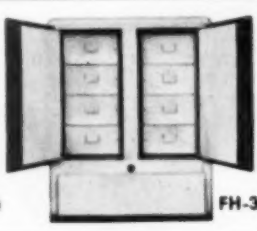
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SELF CONTAINED
UPRIGHT
MODELS18, 23, 30
cu. ft. sizes

F-180



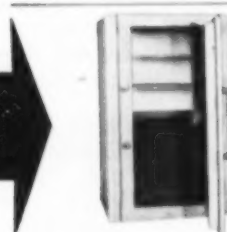
F-230



FH-30

TO FILL EVERY FREEZER NEED

9

SECTIONAL
EXPANDABLE
MODELS30, 60, 90
cu. ft. sizes

FD-301



FD-601



FD-302

DISTRIBUTORS: If you're planning to take on a line of freezers, look into Wilson. Wilson is the line with a future for you . . . for Wilson freezers have the features, the quality, the dependability, and the price to make sales easy.

For complete details and availabilities of wholesale distributor franchises, write, wire, or phone.

WILSON REFRIGERATION, INC., 101 Glenwood Avenue
Smyrna, Delaware

HOME FREEZERS • FARM MILK COOLERS • COMMERCIAL REFRIGERATORS



Cox Manages Fiberglas Low Temp. Insulation Sales

TOLEDO — Appointment of Allan W. Cox as manager of low temperature insulation sales for Owens-Corning Fiberglas Corp. has been announced by Edward J. Detgen, general sales manager of the company's general products division.



A. W. Cox

Cox, with offices in the company's headquarters here, will coordinate sales activities relating to the rapidly expanding uses of Fiberglas low temperature insulations in cold storage facilities, including frozen food lockers, warehouses, and areas storing meat and other perishable items, and for certain industrial applications.

Associated for more than 16 years with the Cork Insulation Co., Inc., he has a broad background in the cold storage field, including eight years' experience in sales of Fiberglas insulations.

New Honeywell Factory Opened In Amsterdam

MINNEAPOLIS — Minneapolis-Honeywell Regulator Co. has established a new factory in Amsterdam to manufacture heating controls abroad for the first time in the company's history. Harold W. Sweatt, president, has announced here recently.

The Holland factory will produce a limited line of automatic controls for oil-fired furnaces.

The new plant becomes Honeywell's third manufacturing operation outside the U. S., the others being in Toronto, Canada, and Blantyre, Scotland.

The company plans to expand the facilities, employment, and production of the plant in Scotland. Manufacturing space will be approximately doubled.

Ga. Service Firm Moves

SAVANNAH, Ga.—Commercial Refrigeration Service has opened for business in its new location at 2604 Montgomery St. H. Earl Stafford and Wm. F. Garrison are the owners and operators.

30 Service Firms Join In Cooperative Full-Page Ad

SCRANTON, Pa. — McConnell's Electric Co. here promoted its commercial and household refrigeration service business by joining with other local firms in sponsoring a "Where To Have It Done" page in a Scranton newspaper.

Thirty merchants in different trades participated in the cooperative advertising program which was aimed at providing residents with a permanent directory of firms that could supply needed services.

The cooperative ad was captioned: "Where To Have It Done. As Near As Your Phone—These Modern Service Firms."

Copy read: "Occasionally everyone has some work around the house and they are uncertain as to where to have it fixed. Herewith are a number of firms, names and addresses, where that little or big perplexing job may be fixed or repaired. It will be wise to file this directory so when the job presents itself you know whom to contact."

Laboratory Test Shows Oil Additive Cuts Friction

NEW YORK CITY—In a test of "Addit 88" conducted by the New York Testing Laboratory, Inc., oil with the additive for the refrigeration industry was found to reduce friction by 46.7% over oil with no additive at 3° F. plus or minus 3° F., according to Sealed Unit Parts Co., Inc., which put this product on the market a few months ago.

The method employed by the laboratory was described as follows:

"Each sample of oil was spread uniformly over a plate glass surface inclined 9° to an approximate thickness of .003 in. Over this film of oil a steel metal block having one smooth surface with an area of 41.3 sq. cm. and weighing 834 g. was allowed to slide for a distance of 17 in. The time required for the metal block to travel this distance was recorded.

"The test was performed in a cold chamber where the temperature of the oil and apparatus was maintained at 3° F. plus or minus 3° F.

"The results obtained were in seconds. The time required for the steel block to travel 17 in. was observed. These results were then converted into percentage by which friction was reduced."

Further tests by independent laboratories are being conducted at this writing and the results will be announced as soon as possible.

Course In Refrigeration, A. C. Offered by College

CORPUS CHRISTI, Texas — The refrigeration laboratory at Del Mar college has organized a basic 50-hour course in air conditioning and refrigeration.

Bob Johnson of Corpus Christi Plumbing Co., who has had 10 years' experience in air conditioning and refrigeration, is the instructor for the sessions which are held each Thursday night.

The 17-week course includes instruction in several types of compressors, heat - temperature - pressure relations, thermostatic expansion valves, float valves, condensers, humidity and air circulation, refrigerants and their use, and motors and motor controllers.

Bush Moves Kaminsky From N. Y. to Dayton

WEST HARTFORD, Conn.—C. L. Babin, assistant director of sales of the Bush Mfg. Co. here, has announced the transfer of Aaron R. Kaminsky, application engineer in the New York office of Bush and the Heat-X-Changer Co., to the position of sales engineer with headquarters in Dayton, Ohio.

Before joining the Bush and Heat-X-Changer organizations, Kaminsky was connected with one of the leading machine distributors in the New York area. He will represent both Bush and Heat-X in the western Ohio, Kentucky, and West Virginia areas.

Edgar L. Disbrow will replace Kaminsky in New York.



"Slants on Service" is a "package" devised by the NEWS to meet the needs of its busy readers in the service and contracting business.

Avoiding Noise Problems With Package A.C. Units

"The increased use of self-contained packaged units has created problems in noise reduction," comments T. A. Williams of Worthington.

"The installation of these units is becoming more and more critical as the number of installations in low noise level rooms, such as banks, offices, funeral parlors, and similar locations is increasing. Tile walls and paneling tend to amplify the noise rather than absorb it and increase the need for careful installation.

"The transmittal of noise through ductwork is also a problem," he says. "The use of canvas collars connecting the ductwork to the unit will prevent the transmission of vibration. Flexible connections in the water line, condensate drain, and power lines will greatly decrease the amount of noise transmitted from the unit to the ducts.

"Package units should be mounted on isolation pads of cork or rubber, and in some cases it may be necessary to line the ducts with sound-

absorbing material to eliminate noise caused by air moving through the ducts.

"These precautions," he explains, "will usually prevent mechanical noise, which the manufacturer has confined within the unit by means of careful cabinet design and proper insulation, from being transmitted to the conditioned area."

Belt Dressing Stops Squeals

Belt dressing is something that should be carried in every service car. Servicemen have changed belts, roughed up the pulley with a file, etc., and still it continued to squeal. A little belt dressing stopped it. There is a special black belt dressing made for rubber and composition belts.

Door Sags? Reverse Hinges

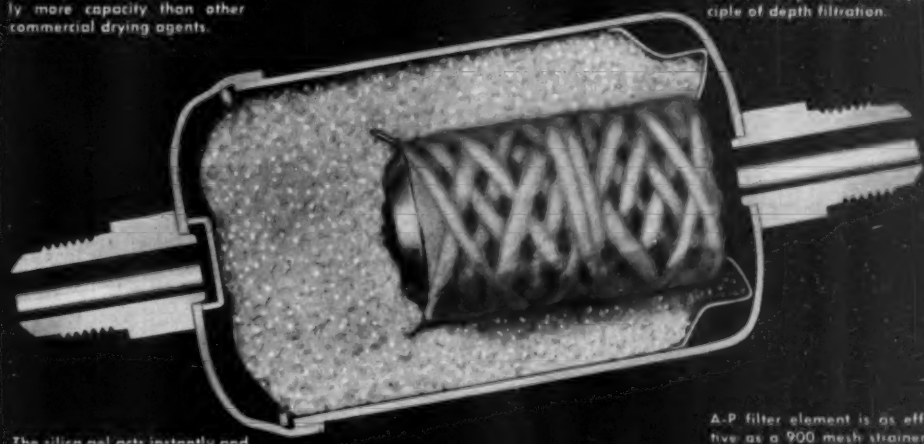
Sagging doors on refrigerators are often the result of worn hinges.

If a replacement hinge is not available, sometimes the trouble can be overcome merely by reversing the hinges between top and bottom locations.

SEE FOR YOURSELF why filters, driers remove impurities as small as 5 microns

Silica gel used in TRAP-DRI takes up 12 to 16 per cent of its weight in water — definitely more capacity than other commercial drying agents.

The honeycomb cotton filter tube is particularly effective because it operates on the principle of depth filtration.



The silica gel acts instantly and is not affected by the oil circulated in the system. It does not give off dust or powder.

A-P filter element is as effective as a 900 mesh strainer in the removal of foreign material, yet there's no appreciable pressure drop.



Torch-o-matic saves time— saves gas! Just pull the trigger and air-acetylene gas automatically ignites—release trigger and gas shuts off instantly. No hazard from open flame when not in use. One-hand operation with no "time-out" to light up and adjust. Pays for itself many times over in savings and convenience. Three sizes of tubes and nozzles take care of any job. Fits your present equipment. Write for complete details.

DEALERS WANTED: Some territories still open—act now!

VELOCITY POWER TOOL COMPANY
7505 Thomas Boulevard • Pittsburgh 8, Pa.



- TRAP-IT is available in six sizes. Capacities 1 to 4 tons.
- TRAP-DRI is available in five sizes; capacities up to 1 ton.

DEPENDABLE Controls

Yes, both the A-P TRAP-IT and the TRAP-DRI actually remove particles of dirt, scale, sludge and other foreign matter as small as 5 microns (approximately .00019 in.) — and do it faster and more completely than any other filter or drier.

The unique honeycomb "depth filtration" filter element, built in both the TRAP-IT and the TRAP-DRI, provides this 100% protection for refrigeration and air conditioning systems. Equal to 900 mesh screen, this efficient element permits a wide range of fluids and flow rates to be handled with no measurable pressure drop. The element will not swell, nor will it shrink or break. Never gets hard or brittle. Does not channel or get soft. Does not release impurities into discharge flow to impair the system.

On the TRAP-DRI, a large charge of silica gel is also used to remove all trace of moisture. This drying agent absorbs 12 to 16% of its weight in moisture — more than any other type.

Protect your service and profits. Write today for Bulletin R-19 and get the full story.

A-P CONTROLS CORPORATION

(Formerly Automatic Products Company)
2840 N. 22nd Street • Milwaukee 45, Wisconsin
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Stocked and Sold by Good Refrigeration Wholesalers Everywhere • Recommended and Installed by Leading Refrigeration Service Engineers

NOW MITCHELL

A ROOM AIR CONDITIONER

Cools and Heats!



DYNA-COOL

for those hot summer days

DYNA-HEAT

for extra winter warmth

MITCHELL now gives you the
**Weath'r-Dial, Dyna-Heat,
Dyna-Cooling.... all at no extra cost!**



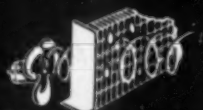
Mitchell sales have pulled way out in front of the pack, because the Mitchell Room Air Conditioner is a better product delivering more cooling... the exclusive features are easy to demonstrate and sell... customers can dial their own personal weather.

PLUS ALL THESE EASY TO DEMONSTRATE



NITE COOL

Moderate cooling for just warm days and nights.



ARID-DRYER

Converts unit to a powerful dehumidifier for humid, muggy days.



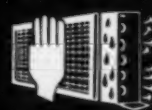
VENTILATES

Brings fresh air into room in any season... Dyna-cooled in summer or Dyna-hot in winter.



COOL AND EXHAUST

Converts unit to giant exhaust fan while cooling room at the same time.



FILTERS

Removes 99% of dirt, dust and pollen from air.

ANNOUNCES THAT BOTH

A Room Air Conditioner
That Doesn't Both
COOL and **HEAT**
IS OBSOLETE!

only **MITCHELL**
does both with the
Weath'r-Dial

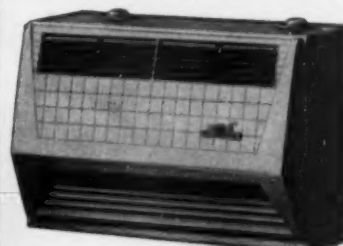
AMERICA'S MOST
ADVANCED ROOM
AIR CONDITIONERS



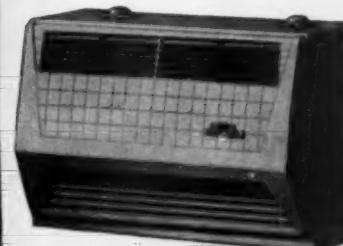
1 H.P. Mitchell Room Air Conditioner
cools and heats with the Weath'r-Dial
at no extra cost.



3/4 H.P. Mitchell Room Air Conditioner
cools and heats with the Weath'r-Dial
at no extra cost.

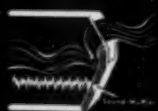


1/2 H.P. Mitchell Room Air
Conditioner.



1/2 H.P. Mitchell Room Air
Conditioner.

EASY TO SELL FEATURES



SOUND MUFFLER

Permits lowest operating sound
level of any unit on the market.



EASY TO INSTALL

Just slide it in the window
plug it in the wall

MITCHELL MFG. CO., DEPT. AC-1

2525 Clybourn Avenue, Chicago 14, Illinois

Rush us details about the 1953 line of Mitchell Room Air Conditioners.
Tell me how to get a Mitchell dealer franchise to sell the only room air conditioners
that both cool and heat with the Weath'r-Dial.

Name _____

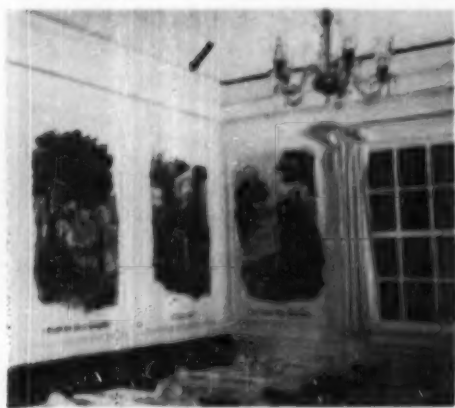
Store Name _____

Address _____

City _____

Zone _____

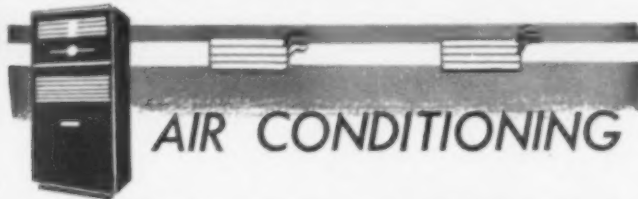
State _____



SPACE between corner molding and ceiling (see arrow) is used for delivery of conditioned air to Stephen Foster dining room at Schuler's restaurant.



END location for return grille prevents any movement of air across ankles of patrons, avoiding possible drafts.



from the plenum chamber above the false ceiling.

According to O'Leary, this arrangement permits a large volume of air to be delivered at low velocity and thus avoids any sensation of drafts. Also, there is no external evidence on the walls or ceilings such as registers or diffusers to indicate that the room is air conditioned.

(This suggests what might be a good topic for research and/or debate: would the presence of a diffuser in the ceiling or wall be noted by a patron who would thus assume that the room is air conditioned and therefore feel more comfortable?)

Location of the air return grilles for this system is also one of their own ideas, O'Leary says.

They're placed directly at floor level and at the ends, rather than in the front, of the built-in upholstered seats lining the walls.

"Because they are at the ends of the seats, there's no possibility of any cold drafts across the ankles of our patrons," he declares.

No provision was made for supplying warm air through the system since there is seldom any need for much heat, the room being enclosed on three sides. What heating may be necessary is provided by two small gas convectors along one wall.

Ventilation is provided, however, when cooling is not required, and although ventilation air is handled through the same duct and delivery system, there is a separate blower and filter apart from those in the packaged cooling unit.

"We've found from experience with the systems serving the other dining rooms that we get better results this way," says O'Leary. "For one thing, we don't have air blowing across the cooling coils all year-round and they're kept cleaner."

Air Conditioning Draws Drug Customers to Store

LINCOLN, Neb. — Year-round air conditioning provided by the central system of the 15-story Stuart building here has been the greatest boon to Carl M. Glen, Jr., proprietor of Glen's Pharmacy on the 10th floor.

Glen pointed out that the location of the store made it imperative during the past summer that a comfortable controlled temperature and humidity be maintained for customers waiting for their prescriptions.

The pharmacy, only 15 by 22 ft., is situated at one end of the Lincoln Clinic maintained by 15 physicians. At first, most of Glen's business came from patients of these doctors. Now, customers are coming from patients of other doctors in the downtown office building as well as from outside.

Included in store equipment is a refrigerator where the pharmacist carries his stock of insulin, antibiotics, and various biologicals. The large refrigerator also has sufficient space that he can refrigerate vitamins.

Air Conditioned Catholic Youth Center Empties Stockyard Area Streets

CHICAGO — The neighborhood around the Chicago stockyards is old and crowded—and steaming in the summer. Yet the streets "back of the yards" had fewer kids in them last summer, and air cooling by courtesy of the fire department and the hydrants was going out of fashion.

All because at St. Augustine's Catholic church a big part of the Franciscan Fathers' work is play for the kids. Housing their youth program is a recently air conditioned 7,500-sq. ft. auditorium, equipped with a stage and a balcony.

Twice a week, the auditorium rumbles with the roller skates of the school children and once a week the teen-agers are the big wheelers. There are basketball tournaments and Catholic Youth Organization basketball play-offs. Dramatics and glee club activities give the stage a workout.

The Franciscans include Boy Scouts, Sea Explorers, Camp Fire Girls, and drum and bugle corps in their many activities for the children. They even have eight completely equipped bowling alleys in the basement.

Besides providing space and equipment for the kids, the hall is the center for adult meetings, church dinners, and practically all the other social activities of the church.

This year, Father Adrian Fischer air conditioned his center. Kids who cooled down under water-spraying hydrants now gather instead in the center, off the streets.

Five model 552 Yorkaire units are staggered along two auditorium walls, another is located on the stage, and the seventh is in the balcony. The system adapts itself to varying loads.

This air conditioning system was sold and installed by Murphy & Miller, Inc., York distributor in Chicago.

Dallas Court Makes Sure Cooling Job Will Be Done

DALLAS — Following a recent meeting, Commissioners Court left little doubt that it would follow through on a proposal to air condition the County Records building and the jail building offices.

The court set aside \$350,000 in a specially earmarked "air conditioning fund" to pay for the job.

County Auditor Moore Lynn told the commissioners the \$350,000 was "an outside estimate" of what the job might cost. He said he thought the money should be set aside so it couldn't be spent for anything else in the meantime.

The engineering firm of Landauer, Guerrero, and Shafer is preparing plans for the air conditioning job.

Schuler's Restaurant Engineers Its Own Inconspicuous Draft-Free Cooling System for Stephen Foster Room

MARSHALL, Mich. — When Schuler's, the famous restaurant here, wanted to air condition its newest dining room (they have seven), the owners had their own ideas of how the job ought to be done, according to John O'Leary, manager.

They called in air conditioning engineers, however, but when the latter offered objections, the restaurant decided to engineer the job itself.

It looks good, and seems to work. The dining room in question is the tastefully decorated Stephen Foster

room. This 39-ft. square room is complete with a fireplace which is purportedly an exact replica of that in the home Foster was thinking of when he composed "My Old Kentucky Home," according to O'Leary.

In panels around the room are large paintings depicting scenes from the many famous Foster melodies. These are softly lighted by fixtures concealed in the large corner molding. This molding also plays a major role in the somewhat unusual air distribution system.

Air is cooled in the basement directly below this dining room by a 5-hp. G-E packaged unit. Thence it is delivered by means of three risers concealed behind the walls to the space directly above the false ceiling of the room.

This space actually serves as a plenum chamber. The corner molding around all four walls of the room does not extend all the way to the ceiling, leaving a space of about 2 in.

It is through this space that the air is discharged into the dining room

If You Wish You Were In Another Business



Read About The Chrysler Airtemp Comfort Zone Line

If you're concerned over slumping sales, slow-moving inventories, unhappy customers, you ought to see what Chrysler Airtemp offers. Here are samples:

PRE-SOLD PROSPECTS—Chrysler Airtemp is a world-famed and respected name. This public acceptance is further enhanced by the most consistent advertising program in the heating industry. There's a ready, waiting market for Chrysler Airtemp products.

A COMPLETE LINE OF PRODUCTS—Chrysler Airtemp manufactures both heating and cooling equipment for the home. This gives you a two-pronged sales weapon. For every furnace installation you sell now, you create a prospect for adding a cooling unit later.

THE MOST LIBERAL COOPERATIVE ADVERTISING PROGRAM IN THE HEATING INDUSTRY—You pay just one-half of the cost for your local-level advertising in any accepted medium; radio, television, newspaper, direct mail, outdoor, etc.

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Airtemp Division of Chrysler Corporation AC&RN-11-52
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**Bulletin 836
PRESSURE SWITCH**

Available for pressures between 30-in. vacuum and 700 lb sq in. Metal bellows operate a reliable snap action precision switch, which has no levers, hinges, or pivots. Range and differential can be easily adjusted in the field. Also, see the Bulletin 837 Temperature Control. Write for full information. Allen-Bradley Co., 1313 S. First St., Milwaukee 4, Wis.



ALLEN-BRADLEY
MOTOR CONTROL



STORING BATTERIES in refrigerated rooms makes it possible to keep the batteries up to 14 times as long before recharging. Willard Storage Battery Co. researchers have discovered. Batteries stored at 100° F. require recharging in 17 days. Same battery held at 31° won't need recharging for six to eight months.

Batteries Stored at 31° F. Will Hold Charge 14 Times Longer Than at Room Temperature

CLEVELAND — Batteries stored under low temperatures can be kept there up to 14 times as long before recharging is necessary, according to research recently completed by Willard Storage Battery Co. here.

Willard is therefore urging its distributors and wholesalers to install cooling equipment for storage of

stock batteries or to make use of commercial cold storage.

The manual of the Association of American Battery Manufacturers states, "All automotive wet batteries will . . . slowly discharge on standing and will discharge much faster when warm than when cold."

Willard researchers have now found that a battery stored at 100° F. will require recharging in approximately 17 days. The same battery stored at 31° F., on the other hand, will not have to be recharged before the end of six or eight months.

The company lists among the advantages of cold storage: factory fresh batteries at all times, less handling and recharge expense, better appearance, less adjustment expense, and more customer satisfaction.

One distributor who is using a cooled basement area for storage reports: "The charge retaining effects of this lowered temperature have been amazing, to say the least. The return on our investment has been truly gratifying."

'One-Stop' Warehouse Saves Safeway Money

SOUTH KEARNY, N. J.—A huge "one-stop" warehousing operation serving Safeway stores in the New York-New Jersey metropolitan area has been opened here by Safeway, Inc. to apply the same savings to food distribution as it tells consumers they will make through "one stop" shopping at Safeway markets.

Safeway President Ligan A. Warren contends that this centralized warehousing system is more economic and efficient than multifarious deliveries to individual Safeway markets from warehouses of individual suppliers.

In its warehouse here, Safeway devotes 300,916 sq. ft. to groceries, 31,274 sq. ft. to frozen foods, 30,620 sq. ft. to milk products, 22,479 sq. ft. to bakery goods, 111,568 sq. ft. to produce, and 118,554 sq. ft. to meat.

In addition, its own huge fleet of trucks are served by an 11,375-sq. ft. truck service and repair center. Another 29,785 sq. ft. is devoted to salvaging returned beer and soft drink bottles.

Through the use of such facilities, Warren believes that Safeway's \$1.5 billion operation will show a greater net profit than last year.

Christiansen New Chicago Distributor for Schaefer

CHICAGO — Schaefer, Inc., ice cream cabinet manufacturer, has announced the appointment of the Robert P. Christiansen Co. here as the Schaefer distributor for Chicago and surrounding counties in Illinois and Indiana.

The Christiansen firm has been supplying items of dairy equipment to ice cream manufacturers in the Chicago area for many years.

The Christiansen Co. will maintain showrooms and warehouse with the full line of 17 Schaefer models. Service and replacement items will also be available.

Danish Industrial Firm Licensed To Produce Recold Equipment

LOS ANGELES — A licensing agreement which will permit a Danish industrial firm to manufacture "Recold" equipment in Denmark has been made with A/S Atlas Maskinfabrik of Copenhagen, according to Hy Jarvis, vice president and general manager of Refrigeration Engineering, Inc.

Negotiations for the agreement were brought about by Albert Rebel, head of Recold's export division.

A/S Atlas is one of the largest manufacturers of industrial and commercial refrigeration equipment in Europe. The company has a world-wide reputation for their large Atlas cold storage plants, sharp freezing plants, and dairy refrigeration installations throughout Europe and parts of South America. They maintain offices in several European countries as well as in Argentina and Brazil.

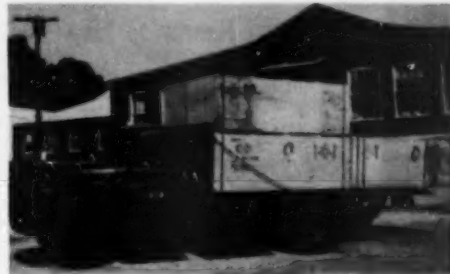
It is expected that Recold coils, evaporative condensers, and air conditioning equipment will be manufactured by A/S Atlas soon.

Refrigeration Engineering said the arrangement "is evidence of the increasing acceptance of Recold equipment in foreign markets."

Miss. Firm Incorporated

JACKSON, Miss.—Robert E. Lee Refrigeration Co. has been granted a charter of incorporation, listing capital stock of \$50,000, it was announced recently.

Commercial Refrigeration



TRUCKLOAD of electric milk coolers for use in various New Hampshire state institutions. Six of these coolers will be used to refrigerate 2,800 quarts of fresh milk daily.

Milk Cooler Contract Goes To Concord, N. H. Firm

CONCORD, N. H.—H. E. Humphreys Co., Inc., refrigeration and food service equipment distributor here, was recently awarded a contract to supply and install six 12-can electric milk coolers at various state institutions in New Hampshire, according to H. E. Humphreys, president-treasurer.

The Esco coolers will be used to cool 2,800 quarts of fresh milk daily. Commented Humphreys: "To the best of my knowledge, this is the largest single installation of wet-storage-type milk coolers made in this state."

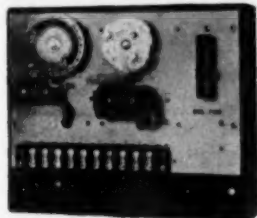
Kantor Opens N. Y. Office For Ice Appliances, Inc.

BALA-CYNWYD, Pa.—Ice Appliances, Inc. here, manufacturer of electrically operated ice crushers and ice shavers for counter use, has announced the establishment of a New York City sales office at 1775 Broadway under the supervision of S. C. Kantor, who will be sales and advertising manager of the company.

JUST ASK US!

Turn to "What's New" Page for useful information on new products.

PARAGON DEFROSTING TIME SWITCHES



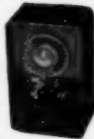
CHRONO-SPRAY Defrosting Control For Water-Spray Defrosting IT'S FAIL-SAFE!

- A completely flexible defrosting control for Locker Plants, Breweries, Dairies, Walk-In Boxes, Unit Coolers, Air Conditioning.
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- "Fail-safe" feature prevents possibility of evaporator fans running while unit is being defrosted. Complete flexibility with utmost simplicity.

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- HOT GAS OR REVERSE CYCLE

An accurate, durable, precision-built time switch for all types of commercial defrosting applications where defrost is two hours or less. Easy-to-set pin-type dial. Heavy hinged case; unbreakable door glass. Also made in heavy-duty outdoor type, Series 330.



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PARAGON ELECTRIC COMPANY

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DELUXE — Drying agent sealed in at the factory — under strict laboratory control. Can be filled with any drying agent desired.



REFILLABLE — Just remove inlet plug and inlet screen tube, pour out old drying agent and refill. Replace tube and plug and it's ready for service again.

CARTRIDGE TYPE — Just remove Range cap from inlet end of drier and replace the old cartridge with new dehydrating cartridge which is completely assembled with filter and strainer unit. On side outlet model, cartridge may be replaced without breaking line.



There are Mueller Brass Co. driers available for every type of service. They keep the refrigerant clean and dry, remove the minute particles of foreign matter and they are safe and reliable wherever they are installed. Each of the three types of Mueller Brass Co. Driers shown here have these fine construction features:

- Exclusive cone screen filter-strainer filled with chemically purified wool provides a filter area 5 1/2 times the area of a disc. This filter increases the working life of Mueller Brass Co. driers because it virtually eliminates clogging, insures free flow of the refrigerant at all times.
- Husky forged brass ends are threaded and soldered to the heavy copper shell to provide an extra factor of safety.
- Wide wrench flats make it possible to get tight connections that stay tight.
- A beautiful finish that makes an especially attractive installation in any system.
- Mueller Brass Co. driers are available in sizes from 1/4" to 1 1/2" outlets, and desiccant capacities from 3 cu. in. to 242 cu. in.



DRIERS AND FILTERS



WROUGHT COPPER FITTINGS



FLARE FITTINGS



LIQUID INDICATORS



VALVES



STREAMLINE refrigeration products are individual and multiple packaged for complete protection. Refrigeration products.

MUELLER BRASS CO. PORT HURON 10, MICHIGAN

What's New

When requesting further information on new products, please use "Information Center" form on opposite page.

Chromalox Will Add 20-KW. Heater to Line



KEY NO. B-1110

PITTSBURGH—The Chromalox UB series of blower-type electric unit heaters now includes a large 20 kw. model, the Edwin L. Wiegand Co. has announced. The new heater, like older 2 to 17 kw. models, is suitable for either floor, wall, or ceiling mounting.

Chromalox electric unit heaters either provide the basic heat source for an office or factory, or supplement the central heating system. In the latter case, they provide controlled warmth in the spring and fall when it is not practical to use the central system.

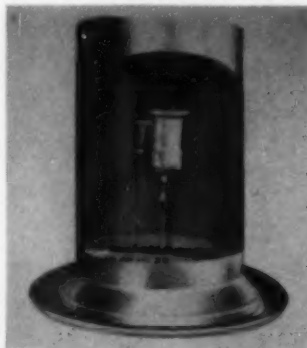
Easily spotted in any location, they overcome drafts in stairways or other hard-to-heat areas. They are also used where precise temperature control is important for production, storage, curing, etc.

The UB heater consists of a heavy-gauge, sheet metal case with durable, brown wrinkle finish, one or more Chromalox "Koilfin" strip elements sheathed with steel for safety, and a fractional horsepower motor blower, according to the company.

Adjustable aluminum louvers can be tilted to deflect the warm air stream up or down about 20°. A thermal cutout guards against overheating.

Most UB heaters operate on either 230 or 460 volts single or three phase. Over-all dimensions of the 20 kw. size are approximately 17 by 21 by 21 in.

Net weight of this size is said to be 79 lbs.



Flexiflo Air Diffuser Is Automatically Adjustable

KEY NO. B-1111

NEW YORK CITY—An air diffuser that will permit considerable variation in the quantity of air delivered without materially changing the radius of diffusion has been announced by Universal Diffuser Corp. here.

This is desirable in air conditioning, it was explained, because as the dewpoint is reduced to satisfy the humidity, the quantity of air must also be reduced to prevent over-cooling.

Called Flexiflo air diffuser, Type "A," the unit is equipped with an air cylinder attached directly to the shaft controlling the movement of the blades. With this cylinder hooked up to an air cylinder operating through a humidistat, perfect automatic control is achieved.

By using a humidistat in series with a thermostat, the volume of air could be reduced when the thermostat is satisfied but the humidistat is not. When the humidity becomes too high the effective area of the Flexiflo will be reduced, thus cutting down the volume of air handled and at the same time reducing the outlet temperature of air leaving the coil.

The Flexiflo Type "A" is also suitable for maintaining constant temperatures through volume control at source of supply, especially in auditoriums, theaters, and other large places where the load is subject to change.

aluminum trim. A Thermopane glass front and Tuf-Flex hardened glass end panels are provided.

Construction is welded steel throughout. Liner is of rustproof aluminum. Banroc and Dow Styrofoam insulation is used. Front is louvered. Fluorescent lighting illuminates the display and eye-level price panel.

Over-all dimensions are 50 by 29 by 56 in. while the food compartment measures 48 by 21 by 19½ in.

Bastian-Blessing Unit Gives Many Drinks Fast



KEY NO. B-1113

CHICAGO—A 3-ft. 6-in. soda unit or stainless steel bobtail fountain designed for installation where many drinks are wanted quickly has been introduced by the Bastian-Blessing Co. here.

The unit is equipped with a carbonated and a plain water draft arm and two patented Coldpoint beverage dispensing systems. The latter enable an operator to dispense four different flavors of mixed and chilled carbonated or still drinks by merely pushing the draft arm handles.

A drive-in theater operator reports having served 263 7-oz. drinks during a 12-minute intermission, according to the manufacturer.

The 9.5-cu. ft. capacity storage compartment contains four syrup tanks and two extra-large chipped ice bins. Two syrup pumps and jars are also provided.

The unit is known as the model 2493 with Coldpoint.

Bailey & Perkins Dairy Case Sells from 3 Levels

KEY NO. B-1112

UTICA, Mich.—A three-level dairy products display cabinet, model GD-2956, was announced recently by the Freeze-Rite Div. of Bailey & Perkins Co. here.

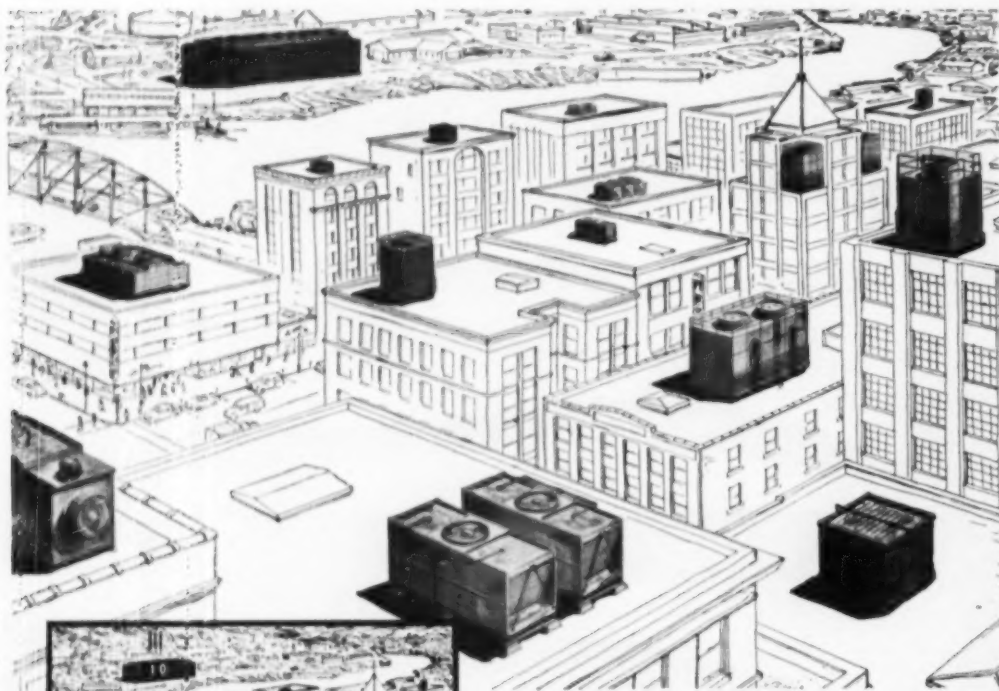
The bottom and center shelves are refrigerated while the top shelf is not. The bottom shelf will hold 108 qts. of milk, while the center shelf will hold 64 pint containers.

Automatic defrosting is provided with a time clock initiating the defrosting action during the early morning hours.

The manufacturer says the entire cabinet is cooled to correct temperatures by a blower and large capacity cooling coil. Faulty, uneven temperatures are eliminated, he said.

A self-contained condensing unit permits moving the cabinet at will. The unit slides out front for servicing.

Exterior of the cabinet is white, high temperature baked enamel finish with stainless steel ledge and polished



In every American City,
the "Marley Story"
is written on the skyline!

- 1—Aquaflo™
- 2—Steel Double-Flow Aquaflo™
- 3—Natural Draft Tower
- 4 & 10—Double Flow™ Towers
- 5—Wood Conventional Tower
- 6—Steel Conventional Towers
- 7—Steel Series V Tower
- 8 & 9—Asbestos Board Cased Conventional Towers

*Registered Trade Names

What kind of cooling towers do air conditioning and refrigeration experts prefer above all others?

For your answer, simply glance out your office window and review the roof-tops of the buildings around you. On hotels and hot dog stands, atop department stores and dairies, on hospitals and homes, chances are, you'll see more Marley cooling towers than any other kind.

This is so because air conditioning and refrigeration contractors know that in the Marley line—the only complete line of water cooling towers—they will find the proper tower for the job at hand. They know that every Marley cooling tower is backed by 25 years of specialized water cooling engineering and production—and that every Marley tower will repay its cost many times over in water savings and trouble-free service.

For the complete Marley story, get in touch with your local Marley Application Engineer. He'll help you select the proper tower to meet your specifications—a tower designed, manufactured, and guaranteed by the world's leading producer of water cooling equipment.

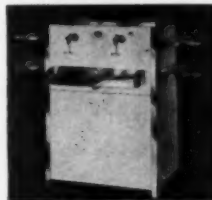


The Marley Company, Inc.

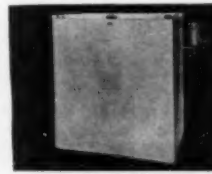
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Sell your condensing unit with remote models for new and replacement jobs—all applications. Capacities 10-1000 g.p.h.; storage 7-300 gals. Filters, Rectifier-Dechlorinators available for all sizes.

Promote your own condensing unit sales with Filtrine's 20-year-life construction . . . high capacity . . . Super Storage . . . more than 40 years' dependability.

COOLERS FOR MESS HALLS — CAFETERIAS

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PACKAGED CIRCULATING CHILLED WATER SYSTEMS

REMOTE COOLERS FOR ALL USES

Sell your condensing unit with Filtrine Stainless Steel or Duco finished cabinets, equipped to suit with top/side shelves, hoppers, glass-fillers. Can be Taste-Master equipped to remove chlorine, rust, sediment from water.

Taste-Master

Sell your condensing unit with Filtrine models repeatedly named by V.A., Signal Corps, Air Force, etc. for X-ray and photo-labs. Under counter design and floor-mounted models with stainless steel work-table top. Filters (extra) to prevent scratched and pin-holed negatives.

Sell your condensing unit! Systems for drinking or processing water—completely packaged with pump, controls, your condensing unit factory installed. Capacities 5-400 g.p.h.; storage 5-150 gals. Filters and Rectifier-Dechlorinators (extra) to insure taste-free, sparkling water.



Remote Model Cooler

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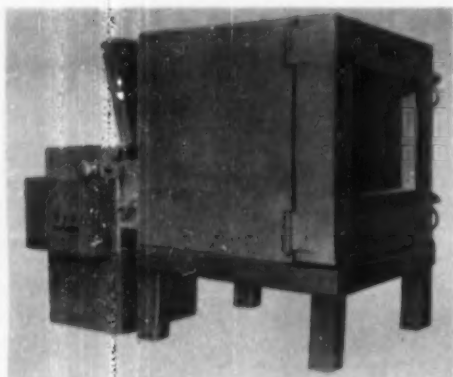


FIG. 1—Temperature chamber is comprised of two separate units. The chamber proper into which tested equipment is placed; the mating unit, which produces the low and high temperatures.



FIG. 2—Humidity chamber not only simulates humidity and temperature conditions but can also be regulated for cycle testing.

Environmental Test Chambers

Fada Radio Installs 2 Units In New Laboratory for Conducting Temperature, Humidity Tests on Government Contract Work

BELLEVILLE, N. J.—Fada Radio and Electric Co. here currently is installing a complete new test laboratory for testing equipment manufactured for the U. S. Government. The new laboratory is expected to be finished by the end of the year and will include provisions for meeting test specifications of all military contracts undertaken by the company.

Included in the equipment already installed are two environmental test

chambers manufactured by Tenney Engineering, Inc. One chamber is for conducting temperature tests only; the other is for temperature and humidity testing.

The temperature chamber, (Fig. 1) comprises two separate units: (1) the chamber proper into which equipment is placed for testing, and (2) the mating unit which produces the low and high temperatures. Temperature range of this equipment is from -100° F. to 185° F.

To produce low temperatures, dry ice (to 150 lbs.) is placed in the container of the temperature-producing unit and a fan circulates air over the ice and into the test chamber.

To produce high temperatures, air is circulated around heating elements. A thermostat controls the temperatures at pre-set values. Thus is provided a simple but effective unit for testing equipment under constant temperature conditions.

This unit and the humidity chamber may be used for testing components such as resistors, condensers, transformers, etc., or for testing complete assemblies such as power supplies. Leads can be brought into the chambers for operating equipment and for connecting test instruments.

The humidity chamber not only simulates humidity and temperature conditions but also can be regulated for cycle testing. When conducting cycle tests, items are left in the chamber for specified periods of time during which the temperature may be varied from 35° F. to 180° F. and relative humidity from 20% to 95%.

The graph in Fig. 3 indicates a test cycle to which ground signal equipment must be subjected prior to acceptance by the Army. Government contracts specify percentage of production to be tested and also the test cycles.

The humidity chamber creates humidity conditions by introducing moisture into the air stream as it passes over heaters. It also is equipped with a refrigeration unit and instrumentation for automatic cycling.

Cycling is controlled by a recording-controller instrument operated by a cam follower. The cam is cut from a blank along time-temperature markings corresponding with the various stages of a given test cycle.

The cam is installed in the instrument panel and as it rotates (by a

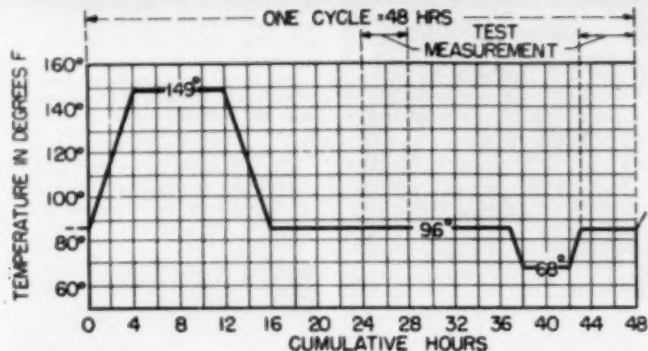


FIG. 3—Graph indicates a test cycle to which ground signal equipment must be subjected for acceptance by the Army.

clock mechanism) the cam follower, which is connected to the controller of the recorder-controller, manipulates the controller so that it regulates cooling and heating equipment through a series of micropneumatic switches.

Fada plans to install additional test equipment for conducting vibration, radio noise interference, life, driving rain, and other tests. At the

present time, Fada sends out most of its test work.

By having its own laboratory this expense will be eliminated and test facilities will be more convenient and can be applied to equipment not now being tested. It is estimated that it would cost the company from \$50 to \$100 a day plus transportation to send out only that work which now is tested in the Tenney chambers.

Blood Cells, Frozen In Glycerine, Can Be Stored Almost Indefinitely, Research Shows

NEW YORK CITY—You can expect to hear more about preservation of blood cells with glycerine now that the one major hurdle standing in the way of large-scale application apparently "has been overcome or at least appreciably reduced," according to Glycerine Information Service.

It was discovered last year that both blood and sperm cells can be preserved almost indefinitely by freezing them in glycerine.

"Research in England had shown that, when thawed, 80 to 90% of the cells preserved in this manner could be recovered unharmed, and in the case of red blood cells, could be added to plasma to make a reconstituted whole blood that was as good as new," the information service recalled.

"One important factor stood in the way of large-scale application, however: the blood cells absorbed a certain amount of glycerine during the process which, unless removed, caused sufficient osmotic pressure differences to rupture the cells when they were added to plasma.

"A method had been devised for extracting glycerine from the cells, but it was a lengthy one and considered too difficult to manage under practical conditions."

But a recent report indicates that

this problem has been solved with the development of a new one-step recovery method, the information service said.

This method, it was explained, "involves the addition of either glucose or sodium citrate to the glycerine-blood cell suspension after thawing."

"Under the increased external osmotic pressure that results, absorbed glycerine and water rapidly leave the cells until a safe concentration point is reached. After the cells are separated by centrifuging, they are ready for use in plasma."

Tenney Plans New Plant To Make Test Chambers

NEWARK, N. J.—Tenney Engineering, Inc. here has completed plans for a 30,000-sq. ft. plant to be constructed in Union, N. J. on Springfield Rd. just off route 29.

Located on a seven-acre tract of land, the plant will be used in the manufacture of Tenney environmental test chambers. It will consolidate two existing Newark environmental chamber plants. Tenney's "low side" refrigeration products will continue to be manufactured at the Baltimore plant.



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ROOM AIR CONDITIONERS

Yes, room air conditioning is your golden opportunity—but you must get started right—sell aggressively—and enthusiastically—right now, before the peak of national acceptance is reached! There's no better advertisement—no surer way to bigger sales than through satisfied customers. And there's no better way to satisfy your room air conditioner customer, than to give him exactly the right unit for the cooling he requires. With Remington there's no money wasted on units too small to do the job or too large to operate economically.

Only Remington enables you to cover the entire market! Only Remington gives you consoles as well as window units—in a wide selection of voltages, AC or DC—air cooled or water cooled models—1/3 h.p. to 1 1/2 h.p.—the industry's most complete line. All are unsurpassed in cooling capacity and efficiency!

But satisfied customers, alone, are not enough. Remington also wants satisfied dealers. That means dealers who are making a profit—who are partners in a good dealer-manufacturer relationship. To that end, Remington offers a really unique dealer franchise. It's something you can't afford to miss. Clip and mail the coupon for details.



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MODEL 2M8

LET AN ORLEY BE YOUR FROZEN FOOD SALESMAN

- The only display lid you can write on.
- BOTH a lighted display and night lid.
- 3-way light illuminates top; specials; and interior.
- Orley 2M8 is a complete freezer and display—overhead also available as a separate unit.
- Easily detachable for use as a lid at night—reduces operating cost.
- Complete with overhead lighted glass panel for write-in of "today's specials."

See your Honor Brand Distributor or Write:

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DETROIT 25, MICHIGAN

Refrigeration Problems

and their solution

by Paul Reed

For Service and Installation Engineers



Paul Reed

Electric Solenoid Valves (1)

The one feature that more than any other has made possible the growth and popularity of electric refrigeration, both domestic and commercial, is that it is automatic. It starts and stops itself in accordance with required temperature and humidity conditions, with little or no attention on the part of the user.

Imagine, if you can, refrigeration equipment that had to be started and stopped, and the valves controlled manually.

One of the devices that contribute so much to automatic control is the electric solenoid valve or, as it is sometimes called, the magnetic stop valve. Except for the larger installations on which motor-operated valves are used, the electric solenoid valve is our only means of electrically opening and closing a valve to start or stop the flow of a gas or a liquid, by automatic control.

Most electric solenoid valves used in refrigeration work are the "normally closed" type; that is, the valve is closed when the current is off and is open with the current on; although most manufacturers of solenoid valves also make them in the "normally open" type in which the valve is open when the current is off, and is closed by turning the current on.

ELECTRO-MAGNETS

The electrical coil that operates the solenoid valve is one form of electro-magnet. When we hear the word "electro-magnet," we usually think of a coil of wire wound around a piece of iron. When current is turned on to the coil, "magnetic lines of force" are set up around the coil and through the piece of iron, causing it to become a magnet, with a north pole on one end and a south pole on the other end, and it will attract

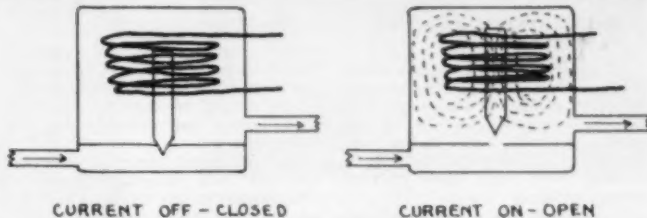


FIG. 1—Schematic drawing of normally closed solenoid valve.

other pieces of iron or steel near it.

This piece of iron is sometimes called a core or pole-piece. Instead of being made of one chunk of iron, it is usually formed of thin sheets, called laminations, riveted or otherwise held together.

If the electric current is disconnected from the coil, it immediately ceases to be an electro-magnet, and its magnetic lines of force disappear. If the pole-piece or core is made of soft iron, it then ceases to be a magnet, and will no longer attract nor repel another piece of iron as it did when the current flowed through the coil.

If the pole-piece or core is made of steel, it retains much of its magnetism after the current is turned off the coil, and some magnetic lines of force remain around the pole-piece. A piece of steel, once magnetized, remains magnetized; so we say it becomes a "permanent magnet."

In most electrical equipment, iron cores or pole-pieces are made of "magnetic iron," a special grade of soft iron, that loses most of its magnetism when the electric current is disconnected from the coil; for it is usually desirable for an electro-magnet to cease being a magnet when the electric current no longer "energizes" the coil.

AIR-CORE COIL

The solenoid coil is much the same as the electro-magnet described above, except that its center is hollow; that is, it is not wound around an iron core, but instead, an open space is left in place of the iron core. This is sometimes called an air-core coil.

Nevertheless, the magnetic lines of force are set up around the coil and in its open center, when the coil is energized by an electric current. When the current is disconnected from the coil the magnetic lines of force disappear.

If, while the air-core coil is energized, a piece of iron is brought near the coil and within the field of the magnetic lines of force, the iron will be attracted much the same as if the coil had an iron core; but with the addition that the coil will try to pull the piece of iron, not only to the coil but into the center of the coil as well.

If the piece of iron is small enough, it will be pulled into the air core and will be held rigidly there in the middle of the coil. It will be found quite difficult to pull it out as long as the current to the coil is left on.

As soon as the current is turned off from the coil, the piece of iron is released and may be removed easily. In fact, if the coil is mounted so that its air coil is vertical, the piece of iron will drop out of its own weight when the electric current is turned off from the coil.

Essentially, this is the principle of the electric solenoid. The solenoid coil is usually mounted vertically, and the piece of iron, then called the plunger, is mounted partially in and partially out of and below the coil.

When the current to the coil is turned on, the plunger is pulled up into the coil and held there while the current is on. If the bottom of the plunger is formed to a conical point or secured to a similarly shaped rod, it can be a valve needle.

With the plunger drawn up into the solenoid coil, the valve is off its seat and the valve is open. When the current is turned off from the coil, the valve needle drops down on its seat, and the valve is closed.

Fig. 1 is a schematic drawing of a rudimentary solenoid valve, showing the essential parts only. In this drawing, the coil is inside the valve and

be used, as the magnetism would not readily pass through an iron or steel cup).

Also, the metal of which this cup is formed should be as thin as possible and still have enough strength to withstand the pressures of the gas or liquid. The less the gap between the coil and plunger, the more power the coil has.

When a valve needle rests on a seat, some effort is required to first get the valve needle off the seat, especially if the difference in pressure on the two sides of the valve is great. However, as soon as the needle is barely off the seat, very little effort is required to merely lift the weight of the needle. It is the breaking of the seal at the seat that takes the effort.

In the solenoid valve, advantage is taken of a very ancient and common principle of building up energy through momentum. Pushing a nail into a board would take a great deal of effort, but by building up momentum in the head of a hammer, we can drive the nail with little effort. Cracking a nut with our fingers is sometimes quite difficult, but building up momentum by hitting the nut with a stone, cracks the nut easily.

Instead of requiring the coil to make a steady pull to get the needle off its seat, a plunger "hammer" is fitted loosely on the needle stem so that the plunger can move an eighth of an inch or so upward before it strikes the stop on the top end of the needle.

When the current is turned on to the coil, the plunger moves freely up the needle and builds up momentum by the time it strikes the stop on the top end of the plunger; then,

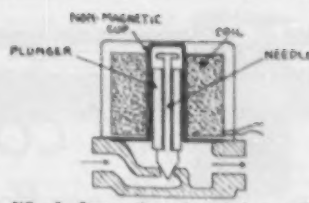


FIG. 2—Cross-section of typical normally closed solenoid valve of the impact-plunger type—Closed Position.

acting as a hammer, it jerks the needle off the seat. Thus a relatively small coil can open a valve that would require much more power for a steady pull. This construction can be called an "impact plunger."

Moreover, when the current is cut off, the plunger adds its weight to that of the needle when they both fall, which tends to "drive" the needle solidly on to the seat. Thus, a small coil that draws no more than 20 watts can operate a valve with an orifice of as much as 1/4 in. diameter, with pressure differences of as much as 150 p.s.i. on the two sides of the valve.

(To Be Continued)

Ed Tanner, San Francisco Contractor, Is Dead

SAN FRANCISCO—Ed Tanner, president of the Tanner Refrigeration Works here, died on Oct. 18, 1952, at the age of 52.

Tanner was a co-founder of the Refrigeration Contractors Association of Northern California, its president many times, and a director at the time of his death.

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AIR CONDITIONING (Year-Round Residential)

Air Conditioning Was an Afterthought

No Basement, No Attic, No Ductwork, No 3-Phase Current—Yet Efficient System Was Installed

ALEXANDRIA, La. — The eight-room house, identified as being in "the high cost field," was about three-quarters built when the owners were persuaded that the house "just had to have air conditioning." The air conditioning ultimately provided by the Baton Rouge York Co. proved to be what is claimed to be a brand new design in zone cooling.

The original plans didn't call for cooling although the summers along here are long and hot. It was believed that climate control would adequately handle the heat problem. And that it might have done, but it would

not have enhanced the re-sale value of this costly house. Mr. and Mrs. A. K. Amman were convinced at a late date that mechanical air conditioning would protect their home from becoming outmoded within the next few years.

The problem of adapting air conditioning to a custom built home deep in its building stages was no small issue. The house had no ductwork, because heating is no problem here. Wall-type super jet gas fired heaters, adequate for heating in this temperate climate, are used in all rooms including the bathrooms.

ONLY ADVANTAGE WAS GOOD INSULATION

The house was well insulated, its only advantage for air conditioning. Its comfortable, sprawling L-shape is composed of shakes and Roman brick. The roof is low-pitched, almost flat, covered with white crushed marble. Rock wool bats insulated the ceilings.

All the rooms are large (the dining room is circular), many having several walls of glass from floor to ceiling. This presents a larger load problem for the air conditioning engineer.

To further compound the problem, the house boasts no garage (a carport in this climate is adequate protection for the family coach), no attic, no equipment room nor basement which could serve as a housing for air conditioning equipment. To make matters even more difficult, there was no three-phase electric current available.

SEPARATE FROM HEATING

The cooling of this house had to be an entirely separate function from the heating. According to many authorities, in several cases this is not undesirable, particularly in a home

where ducts are already installed. York Corp. engineers solved the problem in the following manner: Central station packaged cooling equipment of 7-ton capacity — the minimum required to properly comfort cool the Amman residence — was out of the question because of the electrical requirements. And ductwork at this stage in the building would have been costly to install, perhaps marring the interior lines and design of the house or reducing ceiling heights.

ZONAL SYSTEM WAS THE ANSWER

The answer lay in zonal air conditioning utilizing seven small, compact York residential 1-hp. units. One unit for each bedroom, one for the kitchen, another for the dining room and two units serve the 17 by 33-ft. drawing room with glass floor-to-ceiling walls.

To minimize use of water and increase operating economies, a 7½-ton forced draft cooling tower was located in the carport where it is unobtrusively concealed behind slatted shutters.

One and one-half-in. water lines run from tower to each unit, reducing to 1½ in. for two of the units. The pipes run in "tight" space under the roof. Water is circulated by a 1-hp. centrifugal pump. Six thermostats were installed to give individual zone control.

These thermostats take full line voltage and maintain individual and exclusive temperature control in each room. By a unique control arrangement the cooling tower continues to operate as long as one of the small, 1-hp. conditioners is at work.

Locating the units right at the point of use practically eliminated all ductwork. Supply ducts are mostly Celotex collars running directly from the unit to the supply grille. The only actual ductwork on the job is of sheet metal construction and has a mere 6-ft. stretch.

STUD SPACE BECOMES RETURN DUCT

Return air duct is the space between three wall studs, with the grille located at floor level. The space between the studs was "stopped" at the top and a Celotex collar was made to the return air of the unit.

To simplify the changing of filters a unique arrangement was made: filters were placed just inside the return air grilles. Only two screws need be removed on the grilles and the filters are exposed for cleaning or replacement. This arrangement eliminated removing access panels to the units, except for actual repairs or adjustments to the unit itself.

Julian Brown of the Baton Rouge York Co. was responsible for this zone air conditioning installation. He said that "selective control and economy of operation are the highlights of the system" with which the owners are well pleased.

\$500-PER-TON AVERAGE

He noted that "in every sense of the word this was strictly a pilot job, as nothing like this had ever before been done. And as more jobs like this one are installed it is felt that additional economies can be obtained. Costs of course vary, but a rule of thumb would indicate around \$500 per ton, complete."

Asked about actual installation time, Mr. Brown said that the customer was billed for about 57 hours. Each unit carried a five-year warranty.

He also said that many present day homes are without attics, cellars or equipment rooms making it "tough to install duct systems. I believe that our 1-hp. units provide a new and practical way for meeting problems of this type."

Gas Heating Controls

By Service Information Division,
White-Rodgers Electric Co.

14—How To Re-Calibrate Control In the Field

It is seldom necessary to re-calibrate a "Hydraulic Action" control. The controls are properly calibrated at the factory, but misunderstanding of the control or improper handling may create the necessity of re-calibration.

To re-calibrate this type of control you must definitely know the temperature of the medium, such as air or water, that contacts the temperature-sensitive element. The temperature around the element must be leveled off at a constant.

Thus, a warm air or hot water control with a dial reading as high as 212° could be calibrated in boiling water. Water boils at 212° at sea level. If the dial temperature read as low as 70°, and above, we could calibrate the control at room temperature of 70°, or above.

The important point is to know the true temperature at the sensitive section of the element. Use a good thermometer. Have the sensitive bulb of the thermometer in contact with the sensitive element to obtain a true reading.

To check a control on a furnace you can operate the unit for a few minutes to build up temperature. Then shut down the burner, and blower if it is a forced warm air job, and let the furnace temperature level off. Through a hole in the furnace casing insert a long stem thermometer, placing the thermometer bulb directly on the sensitive section of the element.

When the temperature at the element is a constant and is known proceed as follows:

(1) Close the control differential.

(2) With a screwdriver in the slot in the large dial rotate the dial clockwise or counter-clockwise till you hear the switch operate (snaps).

When the switch snap is heard, rotate the dial in the opposite direction till the switch snaps—do this several times. Stop turning the dial immediately when the switch snaps.

(3) When you hear the switch snap on a counter-clockwise dial rotation, after several actions as indicated in (2), then turn the dial clockwise slowly till the switch snaps. Stop turning immediately when the switch action is heard. Don't change the dial position.

(4) Now read the thermometer and compare it with the dial temperature reading under the fixed indicator.

If there is no appreciable difference in the readings, the control is in calibration.

If there is a difference in the readings proceed as follows:

(5) Without turning the dial or the stud under the dial plate, loosen the two screws in the center of the dial one full turn.

(6) Tip the dial slightly to break the yellow paint dot.

Rotate the dial only until the dial temperature reading under the fixed indicator corresponds to the temper-

ature you read on the thermometer. (7) Without changing the position of the dial plate, tighten the dial screws.

The control is now in calibration. (8) If the control was removed from the heating plant, re-install it. Set the control for normal operating temperatures.

Scale Simplifies Calculations From Fractional Inch Drawings

NEW YORK CITY—"Space-Scale" developed by New-Era Products here is claimed to simplify measuring areas or volumes from fractional inch scale drawings.

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FULLY AUTOMATIC, this 8.7-cu. ft. 1953 G-E refrigerator (the standard LC-87) features a new system of defrosting and directed cold air circulation in the fresh food section. Newly-designed aluminum baffle beneath evaporator causes cold air to circulate down back and around to top of cabinet. Recommended retail price: \$319.95.



COMPLETELY RESTYLED is this single-door deluxe combination refrigerator-freezer (model LM-95), one of three combination units announced by General Electric for 1953. Priced at \$429.95, this model—like the other two—is powered by a newly-designed refrigerating system.

G-E Shows '53 Room Coolers, Appliances--

(Concluded from Page 1, Column 5)
mental wire-mesh grille at the front of the cabinet, can be rotated independently to channel air flow in any direction.

The room air conditioners are turned on by means of a recessed dial on the top left side of the cabinet. Another setting for this dial makes it possible to turn on only the ventilating fan. A similar recessed dial on the top right side of the cabinet controls a damper for the admission of fresh air from the outside.

This permits year-round utilization of the unit, even during the seasons when room cooling is not necessary. The ventilating fan alone may



THERMOSTATIC CONTROL is a major feature of General Electric's 1/2-hp. room air conditioner for 1953. Thermostat can be adjusted to any one of six settings by dial on the front base of cabinet.

be used with the air damper open to bring in fresh outside air or with the damper closed to recirculate room air.

The room air conditioners have been designed for easy installation, but can be adapted for through-the-wall or cabinet-type installation, Donley said.

The cabinets are made of plastic and steel finished with a tan and beige coat of baked enamel. The front grille has a plastic frame.

The 1/2-hp. model, designated the FA-55B, operates on 110 volts and is designed for room areas up to 300 sq. ft. under average conditions. The 3/4-hp. model, designated the FA-75A, is recommended for room areas up to 500 sq. ft. under average conditions and is available for either 110 or 220-volt operation.

Each model is 14 3/8 in. high and 27 1/2 in. wide. The 1/2-hp. model is 28 in. deep and the 3/4-hp. model is 33 in. deep.

Recommended national retail prices are:

FA-75A—3/4-hp. model for 220-volt operation, \$496.95; FA-75A—1/2-hp. model for 110-volt operation, \$429.95; FA-55B—1/2-hp. model, \$349.95.

Automatic Refrigerators

A feature of the two fully automatic refrigerators is directed cold air circulation throughout the fresh food section, according to W. M. Timmerman, general manager of the household refrigerator department.

In these models, a newly-designed aluminum baffle, known as the "Cold Slope," beneath the evaporator, causes the cold air to circulate down the back and around to the top of the cabinet. This results in a more even temperature distribution throughout, Timmerman said. The rotating circulation of cold air is called "Roto Cold."

These two automatic defrosting refrigerators, the standard LC-87 and the deluxe LD-87, are single door models with 8.7-cu. ft. capacity and an across-the-top freezing compartment with a side-hinged latching door.

They feature a new system of defrosting described as follows:

"A 330-watt sealed heating unit is built into the across-the-top evaporator. This heater is turned on automatically by a new frost limiting device known as the 'Frost Limiter' whenever defrosting of the evaporator is necessary.

"This device was developed by engineers who participated in the design of the fire-control system for the B-29 Bomber. It automatically combines the effect of door openings and moisture content of the air as reflected by the amount of time the refrigerating mechanism operates.

"Thus, the refrigerator adjusts itself automatically to varying climates and usage. The adjustable, full-width, downward curving aluminum baffle carries defrosting water to the back of the cabinet where it is channeled to the collecting pan in the base from which it is evaporated."

Combination Refrigerators

Two of the new combination refrigerator-freezers, the standard LK-95 and the deluxe LM-95, are single-door models with 9.5 cu. ft. capacity, and have a separate "well-insulated" inside door with gasket and trigger-action latch to seal off the freezer compartment. The third, the deluxe

LH-11, is a two-door model with 11-cu. ft. capacity.

The separately insulated compartments for frozen foods and fresh foods in the three combination models are separately refrigerated. The newly-designed refrigerating system, known as the "twin system," provides zero-range temperatures for frozen foods and even, moist cold for fresh foods, it was stated.

The freezer compartment in each model is made of aluminum and refrigerated at the top as well as at the back and on the bottom. Defrosting is required only a few times a year and frozen foods can be stored safely for periods up to a year, G-E claims. The freezer compartment of the LH-11 has an automatic interior light.

In the fresh food section of each of the combination refrigerator-freezers is a downward tilted refrigerated coil located at the top. This coil, known as the "Temperator," defrosts automatically, without use of heaters and timers, after each running cycle. The defrost water runs down the Temperator to the back of the cabinet where it is channeled to an evaporating pan in the base compartment.

The deluxe combination refrigerator-freezers are equipped with a thermostatically controlled butter conditioner built into the door, four aluminum shelves, a swing basket, an oven-ware meat dish, and two large fruit and vegetable drawers which roll on rubber-tired wheels.

The LH-11 has four gold-finished "Redi-Cube" ice trays, while the LM-95 has three such trays. The standard LK-95 has three door shelves, three Redi-Cube trays, and two fruit and vegetable drawers. The deluxe LD-87 refrigerator has three door shelves.

Two of the manual defrost refrigerators, the LB-92 and the LA-92, have 9.2-cu. ft. capacity, an across-the-top freezing compartment, and a deep, full-width chiller tray. The LB-92 has three door shelves and two sliding vegetable drawers; the LA-92 has one sliding vegetable drawer.

A third manual defrost refrigerator, the LA-76, has one sliding vegetable drawer.

The freezer compartments of these three manual defrost refrigerators and of the automatic defrosting refrigerators are made of aluminum and refrigerated at the top as well as at the back and on the bottom. Shelves are of anodized aluminum.

The fourth manual defrost refrigerator, the 4-cu. ft. NB-4 designed for small apartments, has corrosion-resistant round steel wire shelves.

The combination refrigerator-free-

ers will reach the market late this year. The automatic defrosting refrigerators and the manual defrost refrigerators will reach the market early in 1953.

Recommended national retail prices are:

LH-11, \$609.95; LM-95, \$429.95; LK-95, \$399.95; LD-87, \$349.95; LC-87, \$319.95; LB-92, \$299.95; LA-92, \$269.95; LA-76, \$229.95; NB-4, \$219.95.

Upright Freezer

The upright freezer, first of its kind to be produced by the company, has a capacity of 490 lbs. and can quick-freeze up to 75 lbs. of food in 24 hours. It stands 71 in. high and is 32 1/4 in. wide and 31 1/4 in. in over-all depth.

The freezer, designated the UA-14, has three refrigerated aluminum shelves and two aluminum bar-type adjustable shelves in the cabinet, plus five door shelves with aluminum fronts.

Other features are two sliding wire baskets, a storage well at the base of the cabinet, adjustable temperature control, automatic interior lighting, outside signal light to indicate proper functioning, and a trigger-action latch with lock.

The 7-cu. ft. chest-type model, designated the HA-7, is 38 in. high, 33 in. wide, and 20 1/2 in. in over-all depth. It occupies no more floor space than the 4-cu. ft. model put out several years ago, G-E said. It has two wire baskets and a capacity of 245 lbs. It can quick-freeze up to 45 lbs. of food in 24 hours.

An 11-cu. ft. chest-type model, designated the HA-11, will complete the line. It is 38 in. high, the same as the 7-cu. ft. model, and 45 1/2 in. wide and 31 1/2 in. in over-all depth. It has three wire baskets, one of which has a handle, and a capacity of 389 lbs. It reportedly can quick-freeze up to 60 lbs. of food in 24 hours.

Fiberglass insulation is used in each of the chest-type models. Each also has an aluminum storage compartment, adjustable temperature control, automatic interior lighting, outside signal light, and a locking latch.

All three freezers are trimmed with gold and chrome. The new models will reach the market early in 1953.

National recommended retail prices are: UA-14, \$499.95; HA-11, \$429.95; HA-7, \$299.95.

Range Line Has Automatic Deep Fat Fryer

In the range line, the automatic deep fat fryer will be a standard feature of the single-oven "Stratoliner" and the double-oven "Liberator," both deluxe, push-button ranges.

The deep fat fryer, according to J. R. Poteat, general manager of the range and water heater department, is a domestic adaptation of the commercial electric fryers favored by chefs. Like most such fryers, it operates on a 220-volt circuit and has an immersion-type heating element suspended in the well in direct contact with the fat.

E-11K Liberator, \$499.95; D-21K Stratoliner, \$449.95; D-11K Speedster, \$369.95; E-10K Constellation, \$359.95; C-31K Airliner, \$309.95; C-21K Stew-

ardess, \$259.95; C-11K Leader, \$229.95; C-10K Beacon, \$189.95; A-41K Studio, \$179.95.

Dishwasher Permits Double Washing

Harold T. Hulett, general manager of the electric sink and cabinet department, pointed out that the new control mechanism in the 1953 dishwasher permits double washing of heavily soiled pots and pans; fast washing of lightly soiled glassware; and the pre-heating of plates for serving hot food.

Two models of the dishwasher are available. The UC-120A, undercounter dishwasher, is a top-loading, front-opening unit that can be installed under new or existing counter tops. Recommended retail price is \$359.95.

The same dishwasher combined with a sink is designated model SE-120A and is priced at \$469.95. A top feature of this electric sink is its improved one-control faucet.

Wringer Washers Restyled

C. E. Anderson, general manager of the home laundry equipment department, said the new line of wringer washers consists of a deluxe, a medium-priced, and a low-priced model. All have been re-styled.

Also included in the home laundry line are two automatic washers and the AD-7 clothes dryer announced earlier this year.

Recommended national retail prices are:

AD-7 automatic clothes dryer, \$349.95; AW-5B4 standard automatic washer, \$299.95; AW-5B5 deluxe automatic washer, \$349.95; WC-520 deluxe wringer washer, \$169.95; WC-450 wringer washer with drain pump, \$129.95; WC-450 wringer washer without drain pump, \$119.95; WC-230 wringer washer with drain pump, \$119.95; WC-230 wringer washer without drain pump, \$109.95; AR-30 portable ironer, \$65.95; IF-810 automatic flatplate ironer, \$379.95.

Nov. Copper Allocations Remain at October Level

WASHINGTON, D. C.—November allocation quotas of refined copper to industry for the production of controlled materials (brass mill products, copper wire mill products, foundry and powder mill products) are the same as for October, the National Production Authority announced recently.

"Slippages" in October production of domestic refined copper and the continued work stoppage at Calumet and Hecla mines cause the domestic allocation quota for November to remain at the October level, NPA explained.

Similar to October, allocations for November are made in two parts: domestic refined copper and other (foreign) refined copper. The domestic copper represents copper refined from domestic ores, concentrates, blister, and scrap. Other refined copper includes copper refined from foreign ores, concentrates, blister, and scrap.

There's always one that's better...and in controls it's Ranco!



Get your teeth into this: Ranco controls are available for more than 4,000 replacement installations—refrigerators, milk coolers, water coolers, commercial units—almost every type of job you'll ever tackle. That, and because of their high quality and dependable accuracy, is the reason why more Ranco controls are in use than any other kind.

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PRODUCTS CORPORATION

HAGERSTOWN, MARYLAND

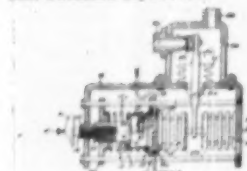
MANUFACTURERS OF THE FAMOUS VICTOR QUICKFREEZE

PATENTS

Week of September 2
(Continued)

ABSTRACTS

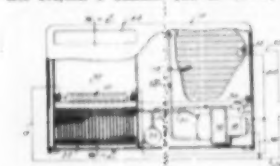
3,400,575. FLUID FLOW CONTROL APPARATUS FOR HEAT TRANSFER SYSTEMS. Warren A. Spedford, Glen Ridge, N. J., assignor to General Electric Co., a corporation of New York. Filed May 4, 1951. Published Sept. 3, 1952.



An air conditioning system which provides heating in the winter and cooling in the summer and utilizes a single heat transfer coil through which either heated or cooled liquid is circulated in provided with a fluid flow control valve actuated solely in response to the temperature of the zone to be conditioned. The actuating mechanism for the valve includes an expandable bellows completely filled with liquid and arranged to move the valve toward its closed position upon an increase in temperature and a second expandable bellows containing a vaporizable liquid and arranged to urge the valve toward its open position upon a rise in temperature. The heater elements of the bellows are responsive to the temperature of the air to be conditioned. The first bellows is urged toward its valve closing position by a compression spring, the extension of the spring being limited by a stop so that upon further contraction of the bellows the spring no longer opposes opening of the valve, and the first bellows contracts further to permit opening of the valve by the second bellows within a predetermined relatively low range of temperature, this being the winter control range. As the temperature increases toward the higher or cooling range, the spring in compression by expansion of the liquid in the first bellows, but the valve is maintained closed until a predetermined temperature is reached at which the vapor pressure in the second bellows is sufficient to displace the first bellows and open the valve in opposition to the spring. Thus, in the cooling range the second bellows opens the valve upon a rise in temperature, whereas during the heating range the first bellows overcomes the second bellows and closes the valve upon a rise in temperature in the heating range. A switch may be incorporated in the valve control so that it is closed upon a predetermined expansion of the liquid filled bellows and may be employed to switch the heat transfer fluid supply system from heating to cooling.

Week of September 2

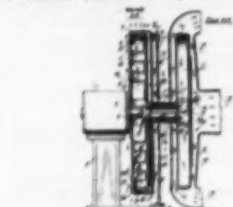
3,400,571. AIR FLOW IN REFRIGERATING APPARATUS. Thomas G. Gleason, Detroit, Mich., assignor to Chrysler Corp., Highland Park, Mich., a corporation of Delaware. Application: June 20, 1950. Serial No. 171,451. 2 Claims. (Cl. 68-117.4.)



1. A refrigerated cabinet for foodstuffs having a height which is substantially waist high, said cabinet having a compartment for the receipt of foodstuffs to be cooled and a mechanical refrigeration system of the compressor-condenser and evaporator type operable to cool said compartment, said cabinet including means defining a vertically extending stack operable to establish a passage for air and means defining an air inlet to the lower portion of said stack and an air outlet adjacent the top of said stack, an air cooled condenser which forms an operating component of said refrigeration system positioned in the lower portion of said stack and an electric resistance heater positioned in said stack down-

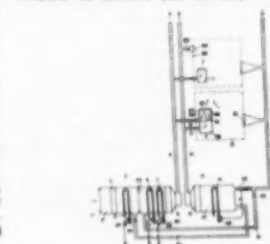
stream of said condenser to improve the draft in said stack.

3,400,572. UNITED CENTRIFUGAL REFRIGERATING MACHINE. Nathaniel R. Wales, New York, N. Y., assignor to Industrial Patent Corp., New York, N. Y. Application May 4, 1951. Serial No. 204,521. 5 Claims. (Cl. 68-117.4.)



3. A centrifugal compression refrigeration machine comprising a symmetrical hermetic shell, a refrigerant in said shell, journal means on which to rotate said shell about its axis of symmetry, motor-actuated means to rotate said shell, said shell internally subdivided into three portions, the first portion containing multi-stage gaseous compression means produced by a series of moving vanes secured to said shell of said first portion and an element supporting an interleaving series of stationary vanes between said series of moving vanes, said element journaled in said second portion and maintained stationary by a pendulous weight positioned in said third portion, the second portion cooperating to form an axial connecting duct between said first portion and said third portion of said shell, stationary liquid refrigerant collecting and duct transfer means in said first portion secured to said stationary element for collecting and conveying the refrigerant liquefied by said gaseous compression means therein through said second portion into said third portion wherein said liquid refrigerant is vaporized and the refrigerant gases therefrom are drawn through said second portion by the action of said gaseous compression means in said first portion to be again liquefied therein.

3,400,743. DUAL DUCT AIR CONDITIONING SYSTEM. Carlisle M. Ashley, Fayetteville, and William L. McGrath, Syracuse, N. Y., assignors to Carrier Corp., Newark, N. J., a corporation of Delaware. Application Jan. 18, 1947. Serial No. 729,320. 14 Claims. (Cl. 98-32.)



1. In the method of air conditioning a building structure containing a plurality of enclosed areas, the steps which consist in under summer operating conditions cooling fresh air to a desired temperature to form a source of primary air, supplying a substantially constant volume of the primary air to said areas, and varying the volume of cooled secondary air supplied in each area in accordance with the internal and solar heat factors present therein.

3,410,038. AIR CONDITIONING. Harry C. Shagoloff, Evansville, Ind., assignor to Servel, Inc., New York, N. Y.

1. In a heat operated air conditioning apparatus, a source of heat, heat exchange means, control means for adjusting said apparatus for operation by heat from said source to supply either a heating medium or a cooling medium to said heat exchange means, a humidistat in said control means for adjusting said apparatus to supply both a cooling medium and heating medium to said heat exchange means simultaneously to dehumidify the air by cooling it below its dew point and heat the dehumidified air, and a differential thermostat in the control means responsive to a condition affected by the heat exchange means and operable at



PROCUREMENT INFORMATION

The following is a list of proposed procurements issued by the various indicated U. S. Government procurement offices. This list is compiled and made available daily on a free pick-up basis. Prospective bidders may obtain complete bid sets by a request to the purchasing office under which the purchase is listed in this synopsis. Be sure to identify completely the bid invitation you wish by including in your request the item description, the invitation number or reference number and the opening date. This will save time in filling your request. For reasons of economy, specifications are normally not included with the bid invitations unless the specification is a new one. First time bidders on a particular item should request a copy of applicable specifications and drawings at the time the request for a bid is made.

It is not necessary to refer solely to the issuing office for additional data on a bid invitation issued by any of the following U. S. Army Ordnance Offices: Ordnance Tank Automotive Center; Detroit Arsenal; Frankford Arsenal; Picatinny Arsenal; Watertown Arsenal; Rock Island Arsenal; Springfield Arsenal; Watertown Arsenal and Watertown Arsenal. Complete information on any purchase listed by any of these offices alone can be obtained from the Ordnance District Office nearest you. Its address is on file in your nearest Department of Commerce Field Office. Do not ask an Ordnance District Office for information on a purchase unless it is listed by one of the above-named offices. Ordnance District Offices do not have information on any other purchases.

Invitations for Bids numbers will be followed by the letter "B." Requests for proposals or quotations will be indicated in this column by the letter "Q," or, if numbered, the number will be followed by the letter "Q."

DEPARTMENT OF DEFENSE

Description	Quantity	Invitation No.	Opening Date
Bureau of Aeronautics, Washington, D. C. Design fabricate and test one 3000 psi 100 cu. in. piston type cylindrical accumulator capable of operating throughout a temperature range of minus 54 degrees plus or minus 3 degrees C. to 204 degrees plus or minus 14 degrees plus or minus 0 degrees C.	3	AE-16-53	30 Nov 52
Commanding Officer, Frankford Arsenal, Philadelphia, Pa. Attn: Procurement Office Blower, spare parts FCB AA M3C M3D	150 ea.	(ORD-53-SP-61)	1 Dec 52
Office of the Purchasing and Contracting Officer, Brazos Air Force Base, Texas Furnish and install Air Conditioning in Base Theater at Reese Air Force Base	Job	(41-420-53-18B)	20 Nov 52
Warner Robins Air Materiel Area, Robins Air Force Base, Georgia Air conditioning of building 1632 at Robins Air Force Base, Georgia	Job	(00-505-53-18-B)	17 Nov 52

Invitation for Bid /B/ and Requests for Proposal /Q/ are distributed to firms listed in the Bidder List maintained by the above activity. A complete bid set is available for EXAMINATION ONLY by prospective bidders at the Air Regional Offices located in the local trading area of the above two activities.

NOTICE TO SMALL FIRMS

The following is a list of proposed procurements which the representatives of the Small Defense Plants Administration and the Contracting Officers have jointly determined, in accordance with the criteria set forth in Section 214 (f) (3) of the Defense Production Act, as amended, shall be awarded to small business concerns. Therefore, the procurements listed below will be negotiated only with small business concerns. Unless otherwise designated by the Small Defense Plants Administration, a small business concern is normally considered by the Department of Defense to be any concern which, including its affiliates, employs in the aggregate fewer than five hundred persons. (If, however, in the light of the facts and circumstances existing at the time of the placement of the contract, the contracting officer considers that a contract cannot be made with a small business concern without detriment to the Government's interest; e.g., because of unreasonable price or other justifiable reasons, the contracting officer may request withdrawal of the joint determination in which case the procurement may not necessarily be placed with small business concerns exclusively.)

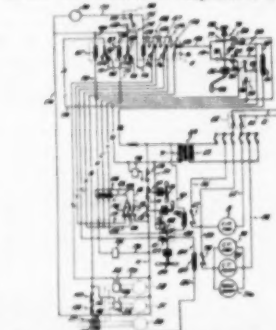
Yards and Docks Supply Office, Port Hueneme, California

Attn: Purchasing Division

Exhaust fans and filters for

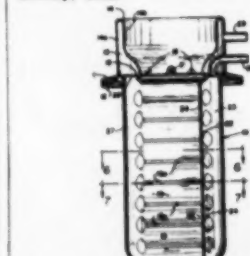
11 itm 555-53 5 Nov 52

upper and lower temperature limits to render the humidistat inoperative where-



by to prevent overheating or undercooling of the air being conditioned.

3,410,034. MILK COOLING ATTACHMENT FOR MILKING MACHINES. Elmer E. Lundvall, Weld County, Ralph W. Becker, Arapahoe County, and Conrad Bokstein, Jefferson County, Colo., assignors to Instant Milk Cooling Co., Inc., Greeley, Colo.



1. In apparatus of the class described, a milk receiver, a milking head provided with milk emitting means and suction connection, a cooling unit including a lid covering said receiver with a fluidtight fit, a reservoir carried by and above said lid, having fluid connection with the receiver, and adapted to receive milk from said head and covered by said milking head with a fluidtight fit, whereby to maintain subatmospheric pressure within the receiver and the reservoir, a cooling element carried by and beneath said lid, and positioned to receive milk from said reservoir, and a conduit interconnecting the reservoir and receiver for equalizing the subatmospheric pressures therein.

(To Be Continued)

Government Contracts

Description	Quantity	Reference No.	App. Bid Date
heating ventilating refrigerating and laundry equip. Yards and Docks Supply Office, U. S. Naval Construction Battalion Center, Port Hueneme, California	5 ea.	555/53Q	5 Nov 52
Fan, Up-Blast, 500 CFM. spec. MIL-F-16717 (DOCKS) with modifications	1 ea.	555/53Q	5 Nov 52
Fan, Top Horizontal, 775 CFM. spec. MIL-F-16717 (DOCKS) with modifications	1 ea.	555/53Q	5 Nov 52
Fan, Exhaust, Spray Booth, spec. MIL-F-16082A (DOCKS) with modifications	1 ea.	555/53Q	5 Nov 52
Filter, Air, Electro-static, spec. MIL-F-16349 (DOCKS) with modifications	4 ea.	555/53Q	5 Nov 52
Fan, Exhaust, Centrifugal, spec. MIL-F-16716 (DOCKS) with modifications	1 ea.	555/53Q	5 Nov 52
Fan, Exhaust, Day Room, Propeller Type, 450 CFM with modifications	3 ea.	555/53Q	5 Nov 52
Fan, Exhaust, Propeller Type, MIL-F-16081A (DOCKS) with modifications	14 ea.	555/53Q	5 Nov 52
Fan, Exhaust, Propeller Type, spec. MIL-F-16081A (DOCKS) with modifications	2 ea.	555/53Q	5 Nov 52
Fan, Exhaust, Propeller Type, spec. MIL-F-16081A (DOCKS) with modifications	10 ea.	555/53Q	5 Nov 52
Fan, Exhaust, Propeller Type, spec. MIL-F-16274 (DOCKS) with modifications	27 ea.	555/53Q	5 Nov 52
Fan, Exhaust, Roof Mounting, spec. MIL-F-16274 (DOCKS) with modifications	56 ea.	555/53Q	5 Nov 52

END OF SMALL FIRMS LISTING

Description	Quantity	Reference No.	App. Bid Date
District Engineer, Tulsa District, Corps of Engineers, Tulsa, Oklahoma Contr. of cold storage and meat cutting plant, Amarillo Air Force Base, Amarillo, Texas	Job	ENG-53-43	20 Nov 52
Purchasing and Contracting Office, Schenectady General Depot, Schenectady, New York Refrigerator electric self contained	65 ea.	(QM-30-127-53-38B)	14 Nov 52
Chicago Quartermaster Depot, Quartermaster Purchasing Division, Chicago, Illinois BID FORMS NOW AVAILABLE DO NOT REQUEST AFTER OPENING DATE	4680 ea.	53-365B	20 Nov 52

GENERAL SERVICES ADMINISTRATION

Description	Quantity	Reference No.	App. Bid Date
General Services Administration, Region 5, 575 U. S. Courthouse, 219 S. Clark St., Chicago, Illinois Refrigerators: electric & gas operated	29 ea.	CHD-1033	11-6-52

U. S. DEPARTMENT OF STATE

Description	Quantity	Reference No.	App. Bid Date
Division of Central Services, Department of State, Washington, D. C. Air conditioning units, 1 HP condense 50 cy. 1	225 ea.	(1B-425 900-16)	11-18-52

U. S. TREASURY DEPARTMENT

Description	Quantity	Reference No.	App. Bid Date
Materials Management Office, Bureau of Engraving and Printing, 14th and C Streets, S.W., Washington 25, D. C. Vent fans 30" exhaust/complete with mounting ring motor and louvers	22	BEP-87	11-7-52

NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS

Description	Quantity	Reference No.	App. Bid Date
NACA Lewis Flight Propulsion Lab., 21000 Brookpark, Cleveland, Ohio Cooling Tower Induced Draft	Job	C-3498	11-14-52

CONTRACTS AWARDED THROUGH OCT. 23

Description	Quantity	Reference No.	App. Bid Date
General Services Administration, 575 U. S. Courthouse, 219 S. Clark St., Chicago, 4, Illinois Water Coolers (Electric)—321 ea.	321 ea.	545,113—Westinghouse Electric Corp., 1625 "K" St., N.W., Washington, D. C.	

Styrofoam Bulletin Covers

Methods of Installation

MIDLAND, Mich. — The Dow Chemical Co. announces the availability of a new bulletin on the use of Styrofoam for low temperature insulation.

In addition to providing the properties of Styrofoam, the 24-page illustrated booklet covers methods of installing the material on various surfaces, how to apply adhesives and finishes, and data on several low temperature applications, including insulated vehicles, ship holds, etc.

Wholesale Supply Named

Servel Distributor in Ore.

EVANSVILLE, Ind. — Wholesale Supply, Inc., of Portland, Ore. has been appointed distributor for Servel refrigerators and water heaters, it was announced by W. Paul Jones, president of Servel, Inc.

The territory of Wholesale Supply, Inc., includes all of Oregon except Malheur county, and five counties in southern Washington.

Paul F. Murphy is president of Wholesale Supply, Inc.

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Every phase of air conditioning and refrigeration selling—store layout, and display, financing, inexpensive advertising, dealing with manufacturers and distributors, selecting and getting the most out of salesmen, outwitting competition, making a profit on trade-ins and service, etc., etc.—covered completely in a 638-page encyclopedia:

"BOTH FEET ON THE GROUND"

by GEORGE F. TAUBENECK

This book wasn't dreamed up—it was lived. Consists almost entirely of "case histories" drawn from interviews with dealers all over the country. All your questions answered by successful appliance merchandisers who have worked them out in practice. Profit from the other fellow's experience!

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Address

Thor Employees with 'E.B.P.' To Be Given Cash Awards

CHICAGO—Thor Corp. is offering extra cash to employees with "E.B.P." (extra brain power).

President John R. Hurley announced a new employee's cash award program for suggestions adopted that result in economy or improvement in any phase of the company's operation.

An award will be made for any adopted idea. Should the idea be used for more than a year and result in a previously stipulated savings, an additional award will be made to the employee.

Designer D. W. Dailey Elected V.P. of Servel

EVANSVILLE, Ind.—Donald W. Dailey, noted designer, was recently named a vice president of Servel, Inc.



D. W. Dailey

In the Wonderbar, Dailey pioneered the use of plastics for household refrigerators, both the exterior and interior walls and the shelves being made of this material, according to Servel.

Dailey holds more than 35 design and mechanical patents in the appliance field. One of the most important of these is the patent he obtained in 1935 for the enclosure of the across-the-top freezer in household refrigerators.

Before coming to Servel, Dailey had served as designer for a number of appliance firms and is credited with many major contributions to the design of General Electric, Fairbanks Morse, and Philco refrigerators.

He was also a consultant to Tappan Stove Co. on ranges, Proctor Electric Co. on irons, toasters, and other small appliances, and was also a consulting engineer to the radio and television division of Philco Corp.

W. Paul Jones, president of Servel, said the election of Dailey is continued proof of the great importance attached by the company to product design and development.

Dailey has written articles for a number of technical magazines and has lectured extensively on product development at such universities as Lehigh, Pennsylvania, Miami, and Syracuse.

"Stories of the Week" In Handy Form



In response to hundreds of requests from AIR CONDITIONING & REFRIGERATION NEWS subscribers, the conductor of its "Inside Dope" column has collected and grouped his best "Stories of the Week." They are now available in convenient book-form for your reading and working pleasure. The book is entitled: "You'll Love This One."

Everyone will enjoy reading this book, we hope, but for the salesman—and for anyone who may be called upon to "say a few words" at a meeting—it should have especial appeal.

Here's why: this book of good stories you can tell is printed on thin paper, bound in flexible leatherette, and designed to fit neatly into your inside coat pocket.

While waiting in an ante-room to see Mr. Bigdome, the sales representative can thumb through it and pick out four or five pertinent jokes which are guaranteed to put his prospect in a good mood.

The man about to make a speech—or one who figures he may be asked to rise and shine extemporaneously—can consult it surreptitiously while the toastmaster is doing his stuff. Although it's jam-packed with grand tales, it isn't bulky. Rather, it's unobtrusive. Looks more like a leather wallet than a book.

You can be the life of the party if you've memorized some of the anecdotes in this book. Everybody loves a good story well told—and all the jokes in this book have been tested on tough audiences, both large and intimate, by the author.

Within its 236 thin-paper pages more than 200 sure-fire laughs are presented. You can use it profitably, and so can your friends. It's handsomely turned out, and will make an appreciated gift anytime.

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11-3-52

Admiral Constructs Neon Spectacular In Frisco

CHICAGO—Construction of a huge 150 by 75-ft. outdoor spectacular sign in San Francisco—the largest west of the Mississippi and one of the five largest in the United States—was announced recently by Seymour Mintz, vice president-advertising of Admiral Corp.

Located at 274 Brannan St., atop a warehouse occupied by Golden State Appliance Distributing Co., Admiral's San Francisco distributor, the new two-sided sign will be visible to the thousands of motorists who drive to and from San Francisco daily across the Bay Bridge.

Mintz said the front of the spectacular will feature colorful red rocket risers and bursts, then will spell "ADMIRAL" in letters ranging from 20 to 13½ ft. in height. "TELEVISION" and "APPLIANCES" will appear in letters 9 ft. high. This side can be seen by persons driving across the big bridge to San Francisco.

Magic Chef Anticipates Record Sales for 1952

ST. LOUIS—With sales during the first nine months 35% ahead of the same period last year, total Magic Chef sales for 1952 are expected to set a record, M. W. Pender, vice president in charge of sales for Magic Chef, Inc. announced here recently.

Pender pointed out that there has been a tremendous increase in the nationwide use of natural and liquefied petroleum gases. He said that home heater sales have doubled since 1949 and commercial range sales have increased steadily over the past three years.

Berman Co., Baltimore, Is New Coolerator Distributor

DULUTH, Minn.—Appointment of H. O. Berman Co., Inc., as the Coolerator distributor in Baltimore was made known by F. C. Margolf, sales manager of Coolerator Co.

President and treasurer of the distributing organization is H. O. Berman. W. A. Jones is vice president. The franchise includes a territory embracing five West Virginia counties and nine counties in Maryland.



Current Literature Available

To obtain further information on the literature listed below, please refer to key number preceding listing. Please use the "Information Center" form on "What's New" page.

Worthington Bulletin Issued On Ammonia Compressors

KEY NO. N-1110

HARRISON, N. J.—A new bulletin, No. C-1100-B38, on ammonia refrigeration compressors has been published by Worthington Corp.

Specifications, pictures, and descriptions of the following units are included:

Self-contained refrigeration units for ammonia; single acting ammonia booster compressors; 4 and 6-cylinder, high-speed ammonia compressors; vertical, single-acting, 2-cylinder ammonia refrigeration compressors; horizontal single double-acting booster compressors; horizontal double-acting motor or steam driven compressors; 60-460 ton Y ammonia compressors; and gas engine refrigeration compressors.

A request on company letterhead will bring a copy of this bulletin.

Catalog Suggests Breakfast Nook and Kitchen Layouts

KEY NO. N-1111

ST. LOUIS—A complete line of ready-built breakfast nooks has been designed for easy installation in the kitchen by Bianco Mfg. Co. here.

The line will be marketed nationally under the registered name "Kitchen Hostess." Distributors and dealers are now being appointed.

A catalog, completely illustrated, in color, describing the various styles of "Kitchen Hostess" nooks and suggesting kitchen layouts is just off the press. Bianco, one of the nation's largest manufacturers of seating equipment, declares that its Kitchen Hostess nooks often save enough in flooring and tile work to pay their cost.

Brochure Shows How Checks Can Advertise Your Firm

KEY NO. N-1112

ROCHESTER, N. Y.—A brochure called "Check Beauty Folder," has been prepared by the Todd Co., check manufacturer, to show how air conditioning, plumbing, and heating firms can increase their company prestige through check design.

The brochure incorporates actual samples of outstanding checks in these fields to show how name, trademark, brand, or products can be advertised under the most favorable psychological conditions—receipt of money.

The brochure points out that every check issued is seen by an average of 16 people. Only 50 checks issued per week would bring a firm's advertising to 41,600 people per year.

Because each brochure contains actual check samples, it will be made available only to company executives who write on their letterhead, the company said.

Thermobloc Catalog Shows Industrial Heating Unit

KEY NO. N-1113

SOUTH NORWALK, Conn.—The Thermobloc Div. of Prat-Daniel Corp. has announced a new general catalog.

The catalog, NGC-10-52, is printed in two colors and features a cutaway illustration of a Thermobloc direct-fired industrial heating unit. Various models manufactured by the company are illustrated both photographically and with line drawings.

Torrington Manual Lists 150 Air-Moving Products

KEY NO. N-1114

TORRINGTON, Conn.—More than 150 types of air-moving equipment are described in the third issue of "How to Have Comfort from Moving Air," a 200-page manual being distributed by The Torrington Mfg. Co. here.

Torrington produces "Variflex" air impellers used by the manufacturers of air-moving equipment who are represented in the guide. Specification

and other data on their products follow more than a score of brief, informative discussions on specific air-moving classifications.

More than 50,000 of the manual will be distributed to both trade and consumer groups. Each section was written by experts in the specific fields, assisted by extensive research data which Torrington compiled.

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$5.00 per insertion. Limit 50 words. 10¢ per word over 50.

RATES for all other classifications \$7.50 per insertion. Limit 50 words. 15¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words. Other addresses by actual word count. Please send payment with order.

POSITIONS AVAILABLE

DISTRICT REPRESENTATIVE wanted for Baker Refrigeration Corporation or Manufacturer's Representative. Liberal commission basis. For southern Ohio plus southern Indiana territory. Products include complete Baker Freon and Ammonia refrigeration and air conditioning line including Packaged Store Coolers. Income opportunity for \$15,000 plus for capable man. Please send replies with resume and photograph to BAKER REFRIGERATION CORPORATION, South Windham, Maine.

HAVE IMMEDIATE opening for two men in dealer contact and development; one in promotion of Carrier's combination furnace and air conditioning units, and one in Carrier's Air Conditioning and allied products. Permanent. Salary and bonus. Engineering education and experience desirable. Write giving all customary information. GARLOCK SALES COMPANY, 432 N. Grand Avenue, Lansing, Michigan.

LONG-ESTABLISHED Hill Distributor equipped with wood-working and metal shops, wants equipment salesman who can sell complete food store installations. Will relocate proper man at our expense. No traveling. Pent up equipment demand will follow lifting of present ban by unions restricting self-service merchandising. This possibility necessitates our expansion. Replies held confidential. LEE SHELL COMPANY, 1141 W. Madison Street, Chicago 7, Illinois.

AIR CONDITIONING sales engineer as New York factory representative for manufacturer of compressors and condensing units—6 to 60 HP and home air conditioners. Must have application engineering and sales experience preferably with manufacturer. Opportunity with unlimited earnings. Write full details of past experience, earnings, etc. F. C. Schnacke, Pres., SCHNACKE, INC., Evansville, Indiana.

SALES ENGINEERS. Leading manufacturer of air conditioning, refrigeration and heating equipment has openings for two sales engineers. Areas: New York City, Philadelphia. Send resume covering age, education, experience. Our present sales engineers know of this ad. BOX 4108, Air Conditioning & Refrigeration News.

ENGINEER: YOUNG man who has rudimentary knowledge of refrigeration, for development of new product and to assist salesmen with technical data. Wonderful opportunity for advancement. Location Detroit. Write fully. BOX 4118, Air Conditioning & Refrigeration News.

SHOP SUPERINTENDENT: Metal working plant located near Detroit has one of the finest opportunities imaginable for a man who can schedule production, handle labor and push work through a shop. Tell us what you have done and what you can do. BOX 4119, Air Conditioning & Refrigeration News.

WANTED PRODUCTION engineer and designer for small plant. Location—central Iowa. Old firm. Experienced on coolers, cases and specialty fixtures. Must know combination wood and metal construction. Able to handle men and reduce production costs. Good deal for top man who can qualify. Write BOX 4128, Air Conditioning & Refrigeration News.

SALESMANAGER FOR a manufacturer of refrigeration fixtures, including cases and coolers. 47 years in business, in Iowa territory, can offer good proposition for producer, who can sell and train salesmen. Reply BOX 4124, Air Conditioning & Refrigeration News.

OWNER OF 20 year old Service and Sales Business, located in Virginia on the east coast, would like to contact a sober, honest refrigeration mechanic familiar with commercial refrigeration and air conditioning, who is capable of assisting in the operation of all phases of the service and sales business. A good opportunity for the right man. Remuneration on commission basis or salary. Please give all particulars as to experience, age, salary expected, etc. Owner's health is not very good, would like a good assistant. BOX 4125, Air Conditioning & Refrigeration News.

Sturtevant Issues Industrial Fan Booklet

KEY NO. N-1115

BOSTON—Eleven sizes of new industrial fans and their standard wheels are fully described in a new 12-page booklet available from the Westinghouse Electric Corp.'s Sturtevant Div. The booklet deals with fans which range in size from 670 to 44,000 c.f.m. at pressures up to 18-in. mercury.

In addition to presenting a table of condensed specifications on performance and dimensions, the booklet discusses each of the three available wheel types—air handling, material handling, and long shavings—and gives typical applications for each.

Also, arrangements in which the fans may be obtained are shown and described. Accessories available and special features are also pointed out.

MANUFACTURER'S REPRESENTATIVE—Room air conditioner manufacturer of national prominence needs representative for its industrial and military specialties. Now used by Boeing, Douglas, G. E., Lockheed, U. S. Air Force, U. S. Coast Guard, etc. Line includes industrial dehumidifiers, laboratory air conditioners, mobile space coolers, trailer air conditioners. Some technical knowledge required. Send full information including accounts now represented to BOX 4136, Air Conditioning & Refrigeration News.

APPLICATION ENGINEER: Graduate Mechanical, Electrical or Chemical. Age 25 to 35. Midwest manufacturer of automatic control devices and accessory items. Must have thorough knowledge of refrigeration and air conditioning. Prefer man with some field experience in the supervision of installation and service work. Duties will deal primarily with application of refrigerant control. Portion of time will also be devoted to design, development and testing of automatic control devices. Give complete details of formal education, experience, marital status, number of children, draft status, also include picture. Salary open. BOX 4137, Air Conditioning & Refrigeration News.

WATER COOLER manufacturer will open branch sales office in Chicago and cover mid-western wholesale distributors. Applications from qualified persons kept confidential. Give experience and starting salary expected first letter. BOX 4138, Air Conditioning & Refrigeration News.

SALES MANAGER. I'm looking for a top sales manager to run a store fixture business for me in Chicago area. I have the franchise for one of the major lines. Have a complete line of refrigeration cases, reach-ins, walk-ins, shelving, etc. I will pay \$500 monthly salary and give you a good share in the gross profits. Excellent location and good facilities are available. Also good financing. If you are really interested send me full particulars about yourself giving all information in the first letter. BOX 4141, Air Conditioning & Refrigeration News.

EQUIPMENT WANTED

WANTED URGENTLY, machinery for manufacturing evaporator and condenser coils, ½ tube. New or used. Outright purchase or rental. Reply BOX 4140, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

NEW—½ and ¾-hp. open type refrigerating units, air cooled. Price: ½ hp., \$24.25; ¾ hp., \$122.60. These units are equipped with Chinaman compressor bases and Century capacitor type motors with built-in thermal protection. Freight allowed on quantity orders of 10 units or more, may be assorted sizes. Write for literature and specifications. ARCTIC-AIRE, 1621 Grand Ave., Kansas City, Mo.

BRAND NEW 1952 frozen food merchandisers original crates. Model FDS18A, 18 cu. ft. thermopane doors; ultra modern superstructure; Kelvinator unit, 8-year warranty. Factory list \$723.50, your cost \$371.00. Order immediately; send for illustrations. MANN REFRIGERATION SUPPLY CO., 440 Lafayette Street, New York 2, N. Y.

ATTENTION SERVICEMEN—Send for our new catalog on controls, valves, relays, brass fittings, V-belts—hermetic and open type units. All new merchandise at great savings up to 50% sold on money back guarantee. WALTER W. STARR REFRIGERATION, 2833 Lincoln Ave., Chicago 13, Illinois.

BUSINESS OPPORTUNITIES

DISTRIBUTORSHIP AVAILABLE to established concerns with facilities for handling sales and service of Kool-Kar, a system to air condition automobiles and ambulances. Units 2 and 3-ton capacity. Refrigeration for motor vehicle cooling is in its infancy. A great future is predicted. Investment required for purchase of units. Distributorship plan will be submitted on request. BOX 4139, Air Conditioning & Refrigeration News.

FRANCHISES WANTED

PANAMA DISTRIBUTOR: Now handling nationally-advertised brand domestic refrigerators; handles own financing, with plenty of cash available, good dealership, and first class sales and service organization. Can guarantee immediate increase in your present showing. Desires change. Initial negotiations strictly confidential. Write Distributorship, Box 3494, Panama, R.P.

Universal--

(Concluded from Page 1, Column 5)
cient finished inventory to meet all orders from distributors. Part of the manufacturing area vacated by room cooler production, when it is moved to the new building, will be used to step up the production of home freezers.

In anticipation of next year's market, room coolers were put into production by Universal earlier this month, in fulfillment of the announcement last August of stepped-up manufacturing schedules for this item. At the time it was said that the initial production pace would be 100 or more units a day.

Universal Major Elec Appliances, organized last April under its present name, has shown monthly net sales substantially in excess of \$1 million since June, Clark asserted, and he declared that the company's operations each month since its formation have been profitable.

Kelvinator Line--

(Concluded from Page 1, Column 3)
tion. The balance of the time was spent in studying methods and means of helping the appliance retailer meet today's merchandising conditions.

"We have embarked upon this product expansion program to enable us to better serve our appliance retailers," Kelvinator's general sales manager said.

"Only retailers who plan in every possible way to cut their overhead by increasing turnover, increasing grossies by buying in quantity or carload lots, and building strong sales organizations to produce sales on a profitable basis, can expect to live and prosper in the competitive years ahead.

"To operate on the most efficient basis, it is going to be almost essential that the retailer concentrate his

efforts on a minimum of brand lines.

"By choice, Kelvinator has fewer dealers than any other major manufacturer in the appliance industry," Packard said. "This is the direct outgrowth of the policy of providing for an adequate market for every dealer, and an adequate dealer for every market."

York Room Coolers--

(Concluded from Page 1, Column 3)

The first session was held at the Hotel Statler in New York City on Oct. 29, for the firm's north and middle Atlantic districts.

The southern and southwest distributors will convene at the Hotel Jung in New Orleans on Nov. 7.

The Knickerbocker hotel in Chicago will be the scene of the east central, midwest, and central district distributors on Tuesday, Nov. 11. Hertzler explained that some of the Pacific coast distributors will attend the meeting in New Orleans while others will attend the session in Chicago.

Heading the York home office delegation will be Hertzler, W. F. Lynne, treasurer; C. A. Barnes, assistant treasurer and assistant secretary; R. H. Dowling, general service manager; V. T. Kartoris, manager of marketing and research; D. C. Seitz, manager of distributor sales; W. E. Landmesser, manager of resale sales; and John S. Garceau, director of advertising and sales promotion.

Addition to S. C. Cotton Mill Will Be Fully Air Cooled

CLINTON, S. C.—The Clinton Cotton Mill has begun construction of a huge, completely air conditioned, addition to its No. 2 plant here. The windowless addition, measuring 350 by 288 ft., will add approximately 100,000 sq. ft. to the plant's manufacturing space with an additional 20,000 feet to be used for cloth storage and shipping.

General Electric, IUE Agree on Wage Increase Based on Nov. 15 Index

NEW YORK CITY—After 10 weeks of negotiating, the International Union of Electrical Workers (CIO) reluctantly agreed to accept the wage increases originally offered by General Electric Co. on Aug. 13 and since approved by 78 other G-E unions.

The increases range from 7½ to 13 cents an hour for most workers. Exactly how much of a boost the IUE members will get will not be known until the latter part of December.

This is because the union chose to tie the cost-of-living part of the increase to the Nov. 15 consumer price index of the Federal Bureau of Labor Statistics. That figure will not be announced prior to Dec. 22.

The original G-E offer would have given CIO workers a total wage increase of 5.65%. A little over 3% of this would have represented the rise in living costs from the time of the workers' last wage increase to Aug. 15.

However, a slight decline last month in the cost of living lowered to 5.16% the total boost available to the unions that came under the contract as of Sept. 15. Of this figure, 2.66% was attributable to higher living costs.

Given the choice of the index figure for Sept. 15, Oct. 15, or Nov. 15, the IUE chose Nov. 15. Thus, the boost for IUE members will increase or decrease if the most of living rises or falls between now and Nov. 15.

FTC Accuses Shell Oil of Anti-Trust Law Violation In Mfr.-Retailer Sales Plan

WASHINGTON, D. C.—The Federal Trade Commission has charged the Shell Oil Co. with setting up a marketing plan which the commission says might weaken competition or create a monopoly in the kerosene and fuel oil business.

The oil company, says the FTC, violates the anti-trust laws by refusing to do business with independent fuel oil dealers unless they agree to sell only Shell products. The FTC has called a hearing Dec. 19 on the matter.

(The FTC would apparently seem to be warring on the type of manufacturer-retailer agreement which calls for the retailer to handle the manufacturer's products exclusively. Reported in the Oct. 27 issue of AIR CONDITIONING & REFRIGERATION NEWS was an FTC cease-and-desist order against the Harley-Davidson Motor Co., forbidding the manufacturer to make or enforce any such contracts.)

The agency said that Shell "sometime during 1951" set up a marketing plan whereby sales of its kerosene and fuel oils to independent dealers were made only if the dealer promised to handle Shell products exclusively.

The dealers, the FTC said, were required to use the oil company's color scheme, trade-mark, and trade name on all delivery equipment. Another part of the marketing plan required the independent dealers to agree to buy a specified minimum

amount of Shell kerosene and fuel oils, the FTC alleges.

The effect of such a marketing plan, said the commission, may be to keep other oil concerns from selling their products to independent dealers. The plan also keeps the dealers from benefiting from competing offers from other oil companies. If a dealer is unwilling to handle Shell products exclusively he loses one source of supply, the complaint added.

Over-all effect of the company's alleged marketing plan, concluded the FTC, is to "substantially lessen competition" and to "create a monopoly in the production, distribution, and sales . . . of kerosene and fuel oils."

Dallas Water--

(Concluded from Page 1, Column 2)
ported that the city had only a four months' supply.

A water shortage was also reported in Houston, but no measures were taken to restrict public use of water at the present. However, the San Jacinto river authority agreed to reduce its allotted water take for large irrigation and industrial interests to ease the drain on fast-dropping city reserves.

The situation in the two Texas metropolitan centers is said to be duplicated in many smaller Texas cities which have also been affected by the drought.

Representation Wanted

If you are a Manufacturer's Representative now calling on truck-body and highway trailer builders, truck manufacturers, and major truck fleets, you may qualify to represent the nation's fastest growing line of ice and mechanical Mobile Refrigeration Equipment in

Cincinnati, Cleveland, Kansas City

Exclusive features and established acceptance pave the way for quick sales. Nationally advertised. Previous refrigeration experience desirable but not essential.

Address Box 4133, Air Conditioning & Refrigeration News



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FRESH MILK!

Grandpa took his milk straight from the cow! Today the process is longer and better, but grocers are sure of one thing . . . when a shopper opens KOCH MODEL 3508

GIANT DAIRY CASE, she is much surer than Grandpa, "back on the farm," was of getting dairy products that are fresh and pure.

The merchant knows, too, that this beautiful, well-lighted wall case draws shoppers to "come look inside" . . . pulls them from all over the store . . . tempts them to open the easy-sliding doors and select "impulse" items such as cheese, spreads, cold meats, and bottled drinks.

KOCH Model 3508 is the ideal wall case for dairy goods . . . and also for cold bottled "take-out" beverages and many other specialties.

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Autumn, winter, spring and summer, there's a Bush unit to handle the heating or cooling requirements for product or comfort. Air Handling units and Comfort Conditioners to take the "dog" out of the summer days; Unit Coolers and Product Coolers, Evaporative Condensers and Cooling Towers for year 'round use; water and steam coils, convectors, finned pipe radiation and baseboard convectors offer a fall and winter line for industrial and domestic heating; condensers, special coils and other heat transfer products all combine to offer the smart businessman a year 'round profit line.

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